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ABSTRACT

This guide is designed to help educators develop a comprehensive and integrated family and consumer sciences educational program for all grades. Chapter 1 provides an overview of the family and consumer sciences program in Connecticut. Chapter 2 describes the various program elements local districts should consider when reviewing, modifying, or developing program offerings, such as program overview, program goals, core topic areas, integrative components, and program structure. Chapter 3 describes a curriculum development process that addresses factors influencing curriculum development, recommended steps in the curriculum development process, integration of Future Homemakers of America/Home Economics Related Occupations into the curriculum, and current perspectives on teaching and learning that affect curriculum development. Chapter 4 provides guidance and tools to assist with the tasks of organizing program topics and selecting student competencies at middle/junior and high school levels. Chapter 5 focuses on integrating academics, offering new planning structures such as tech prep and applied academics programs, and providing experience-based learning initiatives. Chapter 6 addresses promotion of gender equity and valuing and affirming of diversity. Sample and example materials are provided throughout the guide. The chapters list a total of 117 resources. Appendixes include statewide educational goals for students and performance measures and standards for applied education programs. (YLB)

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A Guide to Curriculum Development in Family and Consumer Sciences Education

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State of Connecticut Board of Education — 1995

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A Guide to Curriculum Development in Family and Consumer Sciences Education

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Foreword

The State Board and State Department of Education share a strong commitment to improving the quality of curriculum and instruction for all Connecticut students. *A Guide to Curriculum Development in Family and Consumer Sciences Education* is an example of that commitment. Crafted by a team of state and local educators and reviewed by representatives of associated businesses and industries, this guide is designed to provide local school districts with a fundamental instructional base upon which to build their own curriculum.

The family and consumer sciences curriculum is based on the relationship between work and family. It focuses on the complex problems that families face today, and aims to help young men and women become fully functioning adults, citizens, wage earners and family members. Based on the premise that students need to understand their roles and responsibilities, acquire critical thinking skills and have a solid mathematics, communications and science foundation, the family and consumer sciences curriculum integrates the following: applied academic and problem-solving skills, an understanding of the workplace, technological literacy and competency-based experiential learning. By developing occupational and personal management skills and making academics more relevant through practical experience, the family and consumer sciences curriculum will give students the skills, attitudes and applications they need, whether they choose to go on to higher education or directly to the workplace.

The family and consumer sciences program, in conjunction with planned and ongoing career guidance and counseling, gives students the opportunity to explore a variety of related careers and enables them to make informed decisions about their future education, training and employment. It is a component of Connecticut's school-to-career system, which is designed to prepare students for their roles in society and their positions in a global marketplace. The core elements of the school-to-career system — school-based learning, work-based learning and connecting activities — focus on eight career clusters, each representing a wide range of occupations. *A Guide to Curriculum Development in Family and Consumer Sciences Education* provides instructional units in three clusters: government, education and human services; retail, tourism and entrepreneurship; and health and bioscience.

The world our students are preparing to enter is becoming more complex and competitive, its technologies more sophisticated and its expectations of workers more demanding. This curriculum guide is designed to assist Connecticut educators as they prepare students for the demands of the workplace as well as the challenges they will face as individuals, consumers and family members. It is our intention that the guide provide a framework for local educators as they revise, enhance or produce new curriculums. We hope that by working together, we can build a solid bridge between school, career and adult responsibility for all of Connecticut's children.

Theodore S. Sergi

Theodore S. Sergi
Commissioner of Education

Acknowledgments

The evolution of curriculum is a continuing process. Much of the information contained in this edition of *A Guide to Curriculum Development in Family and Consumer Sciences Education* is new and reflects changes that have taken place in the last few years. The Connecticut State Department of Education is indebted to the Family and Consumer Sciences Education Focus Group, the writers and those who commented on the drafts.

Without the help and concern of these outstanding educators and mentors, this guide would not have been possible. To all of these individuals, a heartfelt thank-you. While many individuals have contributed to this guide, special thanks go to the following groups:

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The fine efforts of all those named here, and of all those whose names could not be included, contributed to the development of a curriculum guide that will help Connecticut educators respond to the impetus for educational change. Those who played a special role in this process include the teachers and administrators who participated in six in-service sessions held during 1994-95 focusing on a working draft of this publication. By using some of the information in the draft and providing feedback on it, these educators played an especially active role in improving the content of this curriculum guide. All of us must now follow their lead and actively create and implement family and consumer sciences education curriculum that will effectively serve the needs of all Connecticut students.

Jo Ann G. Hoff, Consultant
Family and Consumer Sciences Education

Overview 1

Family and Consumer Sciences Education

A History of the Profession

Trends, Statistics and Legislation

The Need for Education in Family and Consumer Sciences

A Guide to Curriculum Development in Family and Consumer Sciences Education is designed to help educators develop a comprehensive and integrated educational program for all grades. It can be used by teachers and administrators when revising or enhancing existing curriculum or developing new curriculum. To provide necessary background, this guide examines such vital topics as:

- new program directions;
- current trends, statistics and legislation affecting the curriculum;
- program goals;
- core topic areas and their integrative components;
- learning competencies needed by students today and into the 21st century;
- current perspectives on teaching and learning that influence curriculum development;
- the organization of program topics; and
- integrating academics and workplace readiness skills into the curriculum.

Chapter 1 provides an overview of the family and consumer sciences program in Connecticut. It will serve as a frame of reference as school districts begin evaluating their existing programs. This chapter will address the mission of the family and consumer sciences program, a historical analysis of the profession, and societal trends affecting the family and the workplace. It also will give a strong rationale for education in the family and consumer sciences area.

Please note that the program name, "family and consumer sciences education," was adopted in 1994 by the Connecticut State Department of Education in place of what traditionally was called "home economics." This name change reflects the national movement to reposition the field for the 21st century with a new name and conceptual framework. In this curriculum guide, "home economics" is used only when necessary to distinguish the name for clarification or when the name is used in a historical context.

Family and Consumer Sciences Education

Family and consumer sciences is an educational discipline based on the family and on the relationship between work and the family.

Why is the family important?

With all of its changing forms, the family remains the basic unit of society — fulfilling our fundamental human needs for support, nurturance and security.

Most children are raised in families. Within the family, we learn attitudes and communication styles, responses to conditions around us, and ways of thinking, reasoning and acting. The family is the first place we turn when faced with challenges and problems.

A functioning family contributes to a healthy society.

Connecticut educators in the area of family and consumer sciences are dedicated to the work of strengthening America's families — encouraging society to do a better job of creating the conditions under which individuals and families can succeed.

Individuals and families today face complex problems. The family and consumer sciences program — with its unique focus on the relationship between work and family — can help people manage the challenges of living and working in a diverse global society. Its aim is to help young men and women become fully functioning adults, consumers, citizens, wage earners and family members.

To achieve its goals, the program looks at the strength and vitality of the family as a fundamental social unit, and takes a life span approach to individual and family development. Using diverse methods of learning, it addresses the skills individuals need to prosper in their homes, communities and jobs. Finally, the program focuses on "school-to-career" programs that meet changing workplace needs.

Forces at Work on the Profession Today

Education in the family and consumer sciences area has changed as society and the workplace have changed. Today, it is the study of family life, child development, nutrition and food technology, personal management, the balance of work and family, and more — the *essential elements of our lives.*

The curriculum has changed in another important way as well. Society, workplace requirements and educational reform have dictated that courses be more demanding in embracing languages, English, the sciences, mathematics and computer technology. As a result, concepts and basic skills associated with these subject areas are now integrated into all family and consumer sciences core topic areas.

Programs today also are focused on preparing young people for the work, family and community aspects of their lives. Preparing students for occupational roles — through school-to-career transition programs — is a high priority for secondary and postsecondary applied education programs. Career development and employability skills are emphasized far more than in the past, especially in light of changing work force requirements and the growing need for workers in occupations related to family and consumer sciences.

As the profession repositions itself, it will continue to build upon its historical and philosophical underpinnings of improving the human condition and quality of life. At the same time, forces will move the field in new directions, such as:

- building consensus for a name change — for the profession as a whole — to "family and consumer sciences;"
- establishing the field's legitimacy as an academic subject;
- promoting the enrollment of both young men and women to encourage the sharing of family and work roles;
- a firm commitment to working with "at-risk" populations, including teen parents and students with special needs;
- a strong emphasis on incorporating employability and workplace readiness skills into the curriculum; and
- educating others about the value and pertinence of the family and consumer sciences education program.

Mission Statements

The following mission statement was adopted in 1991 by the Coalition for Home Economics as the national vision statement for vocational home economics education:

> Vocational home economics education empowers individuals and families across the lifespan to manage the challenges of living and working in a diverse global society. The relationship between work and family is our unique focus.

The mission of the family and consumer sciences education program in Connecticut was developed by focus groups in 1993 and further elaborates on these concepts:

> The mission of the family and consumer sciences education program is to empower people to effectively manage emerging life issues by applying skills, analyzing options and strengthening interpersonal competencies through an interrelated curriculum. Participation in the program enables students to develop skills to manage their own personal, family and career lives, and develop insights into the interaction within families and the relationship of work and family. Family and consumer sciences education applies academic learning to hands-on application and should be an integral part of the education to adulthood.

Family and Consumer Sciences Education in Connecticut

In 1993, school systems in Connecticut employed 550 certified family and consumer sciences/home economics teachers to educate some 90,000 students in more than 400 schools.

Based on identified needs and new directions in the study of family and consumer sciences, the Connecticut program is composed of a *family/consumer* focus and a *work/career* focus.

Each focus contains specific core topic areas that can be considered a link in the development of skills needed to manage one's life in a global economy (see Figure 1-1, page 5).

The *family/consumer* focus prepares young men and women for the transition from school to career and from youth to adulthood. It contains the following core topic areas:

- nutrition and food technology;
- child development;
- family life;
- living environments;
- fashion and textile technology; and
- personal management.

Two or more core topic areas can be combined to create a related course. For example, portions of the core topic areas of child development, nutrition, family life and personal management can be joined to teach a related course in *family and individual health* or *family relationships*. Refer to Chapter 4 for more ideas on combining core topic areas to create new course titles.

The *work/career* focus is designed to prepare students for the transition from school to entry-level jobs, advancement in related jobs, and postsecondary education. It encompasses the core topic areas of study related to these occupations:

- foodservice management;
- child-care services;
- family and human services; and
- fashion and textile production and services.

Integrative components are themes interwoven among the core topic areas. The integrative components included in the family and consumer sciences program area are applied academics, critical thinking skills, career awareness, roles and responsibilities, individual development, consumer education, and safety and sanitation. They reflect the skills needed to manage one's life at home and at work, and are covered in more detail in Chapters 2 and 4.

A History of the Profession

The new framework for the family and consumer sciences profession builds on the historical and philosophical foundations of "home economics." The early aims of the profession were to educate women, improve the plight of immigrants, and enhance family life. The field always has been shaped by social, technological and economic trends — and today, the profession is recognized as committed to providing equal opportunities for all people.

The Beginnings of the Profession

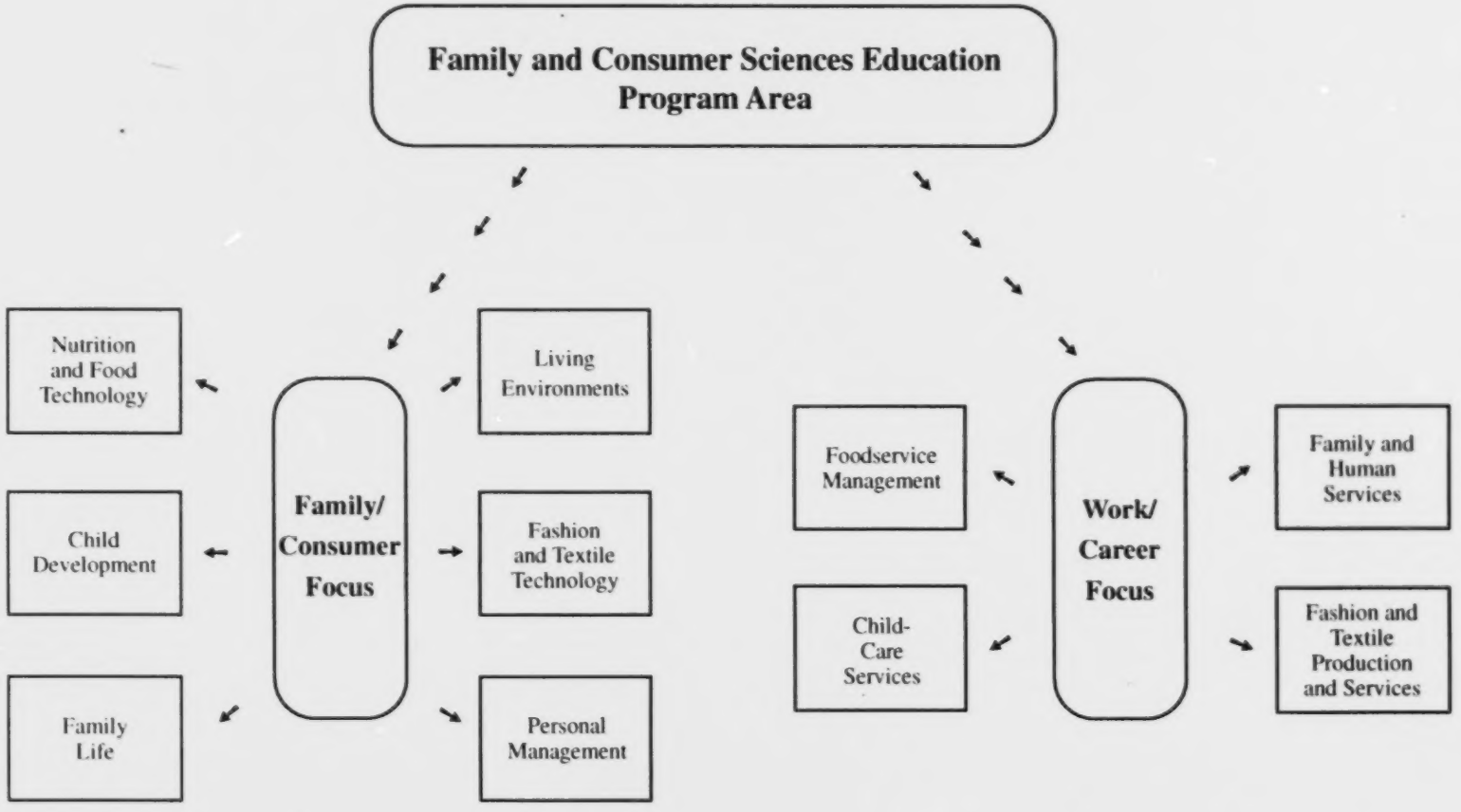
Some historians trace the origins of family and consumer sciences as a field of study to the 1841 publication of Catherine Beecher's *Treatise On Domestic Economy For the Use of Young Ladies At Home*. As a result of this publication, Beecher emerged as a leading advocate for reform of the home and for instruction in domestic economy. Spurred by the Morrill Act of 1862, home economics became institutionalized in women's collegiate education. The Iowa and Kansas State agricultural colleges offered the first home economics-related courses to women in the early 1870s and, by 1900, nine colleges had joined the ranks.

Note: The following discussion of the history of home economics, including Figure 1-2 (page 8), was adapted, with permission, from "The History of Home Economics: 75 Years to Celebrate" by Karen Theroux. *Forecast for Home Economics* (June 1984): 52-56.

> Social and economic conditions in the late 1800s and early 1900s created an ever-widening gap between rural and urban families and between the comfortable middle class and the poor. With the growth of American industry, thousands of rural families moved to factory centers. For a few, the move was the first step on the ladder to higher status and a better life. But for many others, it simply brought a different set of hardships — life in the slums.
>
> Immigration in the early 1900s brought new waves of poor families to American cities, where they lived in a polluted environment of factory dirt and smoke, in crowded dwellings with inadequate sanitation. Resources — time, money, food, energy — were scarce and often wasted through poor management by uneducated and overworked homemakers. These were the conditions that encouraged socially concerned scientists such as Ellen Richards to build public awareness of the need for environmental protection, conservation and home sanitation. (See Figure 1-2, page 8, for a brief description of the achievements of home

(continued on page 6)

Figure 1-1
Family and Consumer Sciences Education Program Organization



economists, including Ellen Richards, who helped establish the field.)

At the same time, rural families, also affected by scarce resources and limited awareness of science and technology, needed help in improving their quality of life. The cooperative extension service was begun, at first offering advice only in agriculture, then adding courses in food preservation. (Since its creation by Congress, cooperative extension has served as a link between the American public and the research facilities of the nation's land-grant universities. It is defined by federal law as an organization for "diffusing among the people of the United States useful and practical information" on a broad array of topics.) Eventually, with the Smith-Lever Act of 1914, Congress provided funding for a formal program in home economics.

The Impact of the Depression and the World Wars

World War I meant even fewer resources were available for families, as goods, food and manpower were diverted to the war effort. As men left for the front and women assumed the work in business and industry, the need for time- and labor-saving methods and devices was critical.

By this time, home economists had proven their worth to society and to Washington. In 1918, the passage of the Smith-Hughes Act provided funds for vocational teaching of agriculture and home economics in high schools. The need for home economics teacher training was greater than ever, and colleges and universities expanded facilities and strengthened their programs leading to a bachelor of science degree in home economics.

The 1920s offered material conveniences to more American families. Washing machines, electric refrigerators and gas stoves could be found in many homes. Home economists encouraged both the use of these new appliances and consumer awareness of product quality. At this time, home economics emphasized acquiring basic skills in food preparation, clothing construction, child care, home nursing, housing and family resource management.

The Depression years handed home economists their greatest challenge. With unemployment and lost savings bringing financial disaster to most families, the fiber of family life began to unravel. Home economists played a critical role in offering advice on stretching severely limited resources. They also worked to secure the aid of government, industry and the community to restore family strength, self-esteem and decent living conditions.

The education of families continued as economic conditions gradually improved. Then came the start of World War II in 1941. The nation mobilized to supply the needs of the armed forces — again creating shortages in materials and the labor force. Home economists helped working women with advice on nutrition, home management, recycling materials, conserving household supplies and extending the life of equipment.

The 1950s through the 1990s

This time period brought the postwar baby boom, the emergence of women into the labor force, a greater sharing of household responsibilities and the dramatic rise and influence of science and technology.

Beginning in the 1950s, home economists paid increasing attention to personal development, as women's roles expanded and families became more affluent. Scientific and technological advances created new interest in research and strengthened the curriculum in areas such as biochemistry and foods.

Industry provided households with many more new conveniences and specialized household equipment that drew heavily on inexpensive energy supplies. Home economists helped teach this new technology. They also made homemakers more aware of their role as managers of family resources, broadening the concept of home management.

The Vocational Act of 1963 defined occupations related to home economics and empha-

sized providing individuals with needed skills. Home economics education became more specialized, preparing students for professions in nutrition, child care, merchandising, home management, clothing design, housing and more.

The 1970s through the 1990s brought more changes and challenges: consumerism, an awareness of the scarcity of nonrenewable resources, the changing structure of the family, new roles for men and women, cycles of inflation and unemployment, the dramatic rise of technology, an alarming teen pregnancy rate, higher reported levels of family violence, high school students unprepared to meet the demands of the workplace, and more. The response of home economics to these challenges is ongoing.

By 1994, the field of "home economics" became known as family and consumer sciences, to reflect social forces and new directions in the field.

As the world and society have changed, the field of home economics has adapted to meet the pertinent and critical educational needs of the times. From Ellen Richards' original pioneering efforts has evolved a complex body of knowledge that has conformed to meet the educational needs of students through what is known today as family and consumer sciences.

What has been achieved over the years?

Enhanced living conditions — better nutrition, child care and housing; consumer protection laws and public policy awareness; improved parenting skills, family communications and resource management; and a balance of men and women in the work force. It is especially important that more opportunities exist today for those with unique needs — pregnant teens, low-income families, infants and children, single parents, people with disabilities, the elderly and displaced homemakers. In every area of a diverse discipline, home economics and family and consumer sciences professionals have put knowledge into practice to aid families through every stage of life.

Adapted, with permission, from "The History of Home Economics: 75 Years to Celebrate" by Karen Theroux. *Forecast for Home Economics* (June 1984): 52-56.

Trends, Statistics and Legislation

The family, the workplace, our schools and communities are facing unprecedented changes that affect the way we teach family and consumer sciences education. Social, technological, demographic and economic trends are affecting the curriculum — from how we address teenage pregnancy, to how we raise and care for children, to how we prepare students to enter the work force.

Our future is forecast in the lives of our children and the ability of our families and communities to raise them. Their environment is molded by the major trends taking place in society — each of which has special consequences for children and families.

The following points should be considered by educators as they begin to develop an appropriate family and consumer sciences curriculum for today's students:

- ✓ trends reshaping education and the labor force;
- ✓ facts about children and teens;
- ✓ changes affecting the family; and
- ✓ issues regarding working parents and child care.

✓ Trends Reshaping Education and the Labor Force

Students need to be better prepared to meet the demands of a changing workplace. It is clear that something is wrong with the link between education and employment in this country. Reports such as *Workforce 2000* (commissioned by the U.S. Department of Labor) maintain that a serious mismatch has developed between the skills of the work force and the jobs of the future.

The *Secretary's Commission on Achieving Necessary Skills (SCANS) Report* (also prepared by the U.S. Department of Labor) found that more than half of the nation's young people leave school without the knowledge or foundation required to find and hold a good job. These young people will pay a very high price — the bleak prospect of dead-end work interrupted only by periods of unemployment.

The *"Forgotten Half"* studies (sponsored by the William T. Grant Foundation Commission on Youth

Figure 1-2
Some Home Economists Who Led the Way

Ellen Richards	Ellen Richards was the first president of the American Home Economics Association (AHEA). She was the first woman to receive a B.S. from the Massachusetts Institute of Technology (MIT), a pioneer in opening the field of science to women, and an activist on behalf of families. From 1884 until her death in 1911, Ellen Richards helped to run a chemical laboratory set up at MIT to study sanitation. Her work led her to simplify and improve her own household according to scientific principles and to share her ideas with others. She valued the home as the center of all society and wanted it to become a healthy, comfortable environment free from disease and drudgery. The last 20 years of her life were devoted to reaching this goal though the home economics movement. In 1899, she helped initiate the Lake Placid conferences at which home economics took shape as a new discipline based on science, economics and sociology.
Isabel Bevier	Second president of AHEA, Isabel Bevier was a chemist who worked for more than 20 years as the director of household science at the University of Illinois. Her goal was to establish a place for home economics in higher education.
Annie G. and Melvil Dewey	Annie Dewey was a leader in women's education, a co-founder of the International Library of Congress and first librarian of Wellesley College. She helped establish home economics in public schools and colleges. With her husband, Melvil, Annie Dewey developed the Dewey Decimal System.
Martha Van Rensselaer	An extension home economist, Martha Van Rensselaer was a leader in developing rural home economics education. She worked to build the home economics department at Cornell University and to promote government policies to aid families.
W. O. Atwater	A Yale-educated chemist, W. O. Atwater specialized in the study of nutrition and developed the first table of caloric values. He also established the first U.S. agricultural experiment station.

Adapted, with permission, from "The History of Home Economics: 75 Years to Celebrate" by Karen Theroux. *Forecast for Home Economics* (June 1984): 52-56.

and America's Future) report that educators have become so preoccupied with those who go on to college that they've lost sight of those who do not. More and more of the noncollege-bound now fall between the cracks when they are in school, graduate inadequately prepared for the requirements of society and the workplace, or drop out.

Employability skills are needed. Today's employment picture demands skills that make a person employable. Employees today need:

- more math, science and job-specific skills;
- interpersonal skills to be able to function in a multicultural environment;
- the organizational skills to be able to operate independently in a position that may rely more on automation and less on human supervision;
- individual competence skills and leadership skills to be able to work with others creatively to help their employers succeed in a highly competitive marketplace; and
- the abilities to solve problems, develop in their careers and blend their work and family lives successfully.

Educational reform is underway. States and communities are responding with new planning structures such as Tech Prep programs, statewide school-to-career transition policies, new partnerships between schools and employers, and other experience-based learning initiatives (William T. Grant Foundation 1991).

Only about 70 percent of American students complete high school in four years. An additional 15 percent finish by age 24 (U. S. Department of Education and the U.S. Department of Health and Human Services 1993). State Department of Education data show that in Connecticut in 1994, the graduation rate for white students attending public high school was 82.7 percent; for African American students, 65.5 percent; and for Hispanic students, 51.6 percent.

We are moving toward a "mosaic society." With increased ethnic diversity, a growing population of older adults and more single-person households, we are moving away from a "mass society" toward a "mosaic society." Our schools and the labor force will be increasingly multicultural and multilingual (United Way Strategic Institute 1990).

The proportion of whites in the labor force will decrease as the proportion of blacks, Asians and Hispanics increases. The Hispanic labor force will grow rapidly — from 8 million in 1986 to 14 million in the year 2000. Nonwhites will make up 29 percent of new entrants into the labor force between now and the year 2000 — twice as many as in 1986 (Schultz 1991).

Information technology is changing the way we live and work. Information technology as a teaching and learning tool will continue, while concern about the scientific literacy of the U.S. population will increase. As we become bombarded with information, the quality of the information is degraded — an important issue for the future (United Way Strategic Institute 1990).

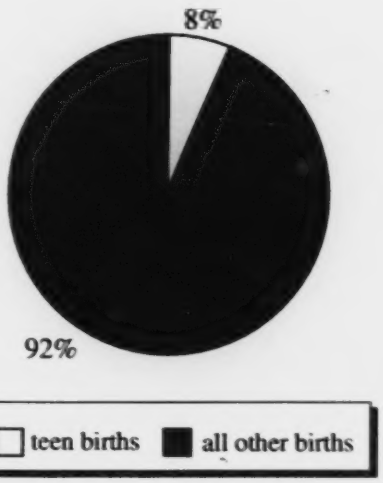
There is a growing need for workers in occupational fields related to family and consumer sciences. Jobs in child care, retailing, nutrition and foodservice, restaurant management, and family and human services are expected to grow at a faster-than-average rate until the year 2005 (U.S. Department of Labor 1993).

✓ Facts about Children and Teens

Five million children in the U.S. under age six live in families with incomes below the poverty level. This figure is 23 percent of all children under age six, and is more than double the rate for adults (Home Economics Education Association 1991). In Connecticut, 10.4 percent of children live in poverty. Nationwide, Hartford has been identified as one of 10 cities with the worst child poverty rates (Children's Defense Fund 1992).

There Has Been an Explosion in the Number of Homeless Families. Families with children make up one-third of the homeless population. An estimated 100,000 children go to sleep homeless each night. Badly housed or homeless children — usually the poorest of all children — suffer all the health, developmental and nutrition risks that children in poverty suffer (ibid.). In Connecticut, more than 5,000 school-age children lived in homeless

Figure 1-3
Eight Percent of All 1991 Connecticut Births Were to Teens



Source: Connecticut Department of Health and Addiction Services

shelters in 1993 (State Department of Education estimate based on data collected by the Department of Children and Families and the Department of Social Services).

A quarter of a million infants every year are born to mothers who did not receive early prenatal care. About 700 babies are born each day at low birth weight, needing advanced medical technology to survive and often still left vulnerable to a lifetime of disabilities. An estimated 40,000 infants die each year (Children's Defense Fund 1992).

About one million teenagers in America have become pregnant every year since 1973. About one out of 10 girls, ages 15 to 19, gets pregnant every year (Kantrowitz, 1990). Almost half of the 2,800 teens who get pregnant every day give birth (Schultz 1991).

In Connecticut from 1985 to 1990, an average of 4,000 teenagers gave birth, and more than 5,000 teens had abortions annually (*Hartford Courant*, Oct. 18, 1993.)

According to data provided by the Connecticut Department of Health and Addiction Services, 8.2 percent of all births in Connecticut in 1991 were to teens — 3,995 teen births out of a total of 48,542 (Figure 1-3, at left).

Nationwide, the number of children reported as neglected has almost tripled since 1980. The three most prevalent problems among families reported for abuse or neglect are economic stress, difficulties in handling parental responsibilities, and substance abuse. Connecticut had 19,831 reported cases of child abuse and neglect in 1990 (Children's Defense Fund 1992).

One study in Wisconsin found that cases of child abuse increased by an average of 123 percent in counties where the unemployment rate had risen by 3.1 percent or more. Counties where the unemployment rate declined had fewer reports of abuse (Coontz 1992).

Earning potential is poor for high school dropouts and graduates not going on to college. An estimated 700,000 students drop out of school each year — almost 2,000 every day — and another 700,000 graduate without the skills they need to find and keep jobs. Many older teenagers and young adults without higher education can't find jobs that offer a future and pay a living wage.

In 1990, young male graduates not going on to college earned, on average, just $12,787. For male high school dropouts between the ages of 20 and 24, average earnings were only about $8,349; young female dropouts earned a shockingly low $3,109 (Association for Supervision and Curriculum Development 1990).

Because real income declined sharply for young workers during the 1970s and 1980s, the percentage of young workers able to support a family of three above the poverty level fell from 58 percent to 44 percent during the same period (Schultz 1991).

✓ Changes Affecting the Family

The family has become a diverse institution, with many single-person households, single-parent families, and two-income families. In a rapidly changing — often chaotic world — the family is expected to grow in importance as a stabilizing force.

Yet, at the same time, the stresses on family life may make the family less able to fulfill its support-giving role without help from the government.

Students who marry today still have a 50 percent chance of seeing their marriage end in divorce. As a result, single-parent families — especially those headed by women — will continue to increase.

Another outcome of divorce is the feminization of poverty, which has resulted in reduced income for women in every income category. Fifty percent of children who live in female-headed households live in poverty, compared with 12 percent of those who live in male-headed households.

A third outcome is blended families. At least one spouse has children at the time of most remarriages. Currently, 6.5 million children live in blended families (Ohio State University, Department of Home Economics Education, 1988, and Schultz 1991).

Services by commercial concerns will proliferate. Many functions once handled predominantly by families — meal preparation and child care, for example — increasingly will be offered as services by commercial concerns (United Way Strategic Institute 1990).

Family issues are gaining increased attention. Lack of affordable housing, pervasive homelessness, extensive child poverty, environmental degradation, the AIDS epidemic, and youth and family violence are some of the family issues gaining increased attention.

More coalitions involving business, government, education and the nonprofit sector are expected to merge to address social problems seen as beyond the government's ability to address alone (ibid.). Across America, people are recognizing that all of the institutions and agencies charged with nurturing and strengthening families must collaborate, since no single institution has the resources to do the job alone (U.S. Department of Education and U. S. Department of Health and Human Services 1993).

Activities and services such as shopping, banking, movies and electronic mail have been brought into the home. The availability of information technologies such as computers, videos and cable television will change the role of the home in society (United Way Strategic Institute 1990).

A two-way communications network will deliver interactive television programming, computer databases, home shopping, educational software, video games and telephone service on hardware that will perform all the functions of a combined television set, telephone, video recorder, personal computer and fax machine.

Video encyclopedias will be delivered inside the home. Picture phones will become a reality. Home shopping will offer instant comparative information on pricing and styles. Television viewers will be able to rent videos electronically on demand (*Hartford Courant*, October 14, 1993).

Quality of life issues such as health are beginning to emerge as key areas of public concern (United Way Strategic Institute 1990). America's growing interest in health is evidenced, for example, by the U.S. Department of Agriculture's introduction of the food guide pyramid concept and new food labels to promote healthier eating habits.

The dinner hour has changed. Seven out of 10 families say they eat together three or more times a week and 56 percent of American families say they eat dinner together every day. The average time a family spends eating dinner is 32 minutes. However, what is now referred to as cooking is more accurately described as "assembling." Cooking dinner may mean pulling together prepared vegetables from a salad bar, frozen meats from a store, mashed potato mix and boxed ice cream bars. Seventy-seven percent of all homes report cooking with a microwave (Shapiro 1990).

Home ownership — the traditional route to long-term family security — is increasingly out of reach. The economic decline of the 1980s and 1990s cut deeply into the ability of parents to offer their children a safe and stable place to call home. In 1991, only one-third of families headed by a parent younger than 30 were homeowners, down from almost half in 1980. For families with the fewest resources, the effects have meant homelessness (Children's Defense Fund 1992).

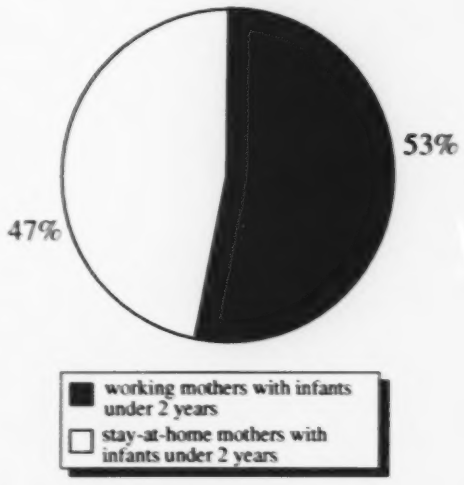
Land shortages and technical innovations will change homes of the future. Suburbia is running

out of space, and land is becoming a luxury that many Americans will be unable to afford. Forecasters say that instead of single-family homes scattered three to an acre, developers will construct a mix of homes and townhouses at an average density of, perhaps, 12 per acre. Advances in technology soon will make possible integrated automated remote control systems for various appliances and home heating, cooling and security functions (Adler 1990).

✓ Issues Regarding Working Parents and Child Care

Over the past several decades, women have been entering the work force in record numbers. The number of working women today has roughly doubled since 1955 (Calonious 1990). Some 53 percent of all mothers with infants younger than 2 are in the work force (see Figure 1-4, at right), and 67 percent of all mothers with children under 18 work outside the home — up 20 percent since 1975 (Children's Defense Fund 1992). Currently, one million latchkey children are left unsupervised before and after school (Home Economics Education Association 1991).

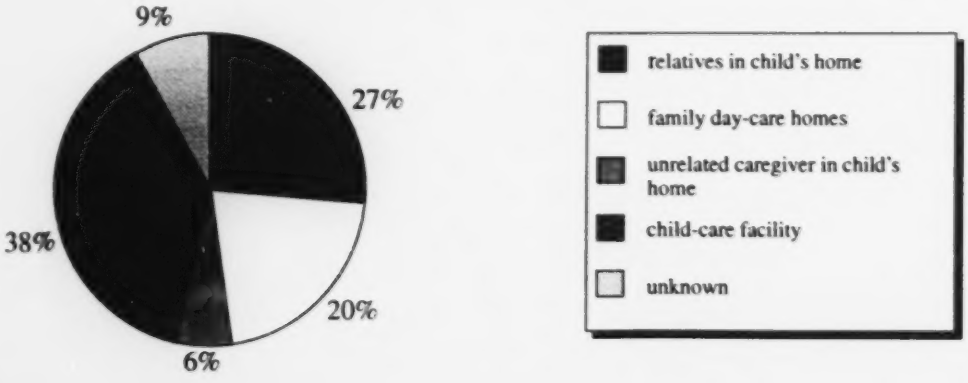
Figure 1-4
About Half of All Mothers of Infants Work Outside the Home



Source: Children's Defense Fund 1992

Working parents rely on a variety of child-care arrangements, depending on cost, availability, quality and other factors. Caregiving options include child-care facilities, family day-care homes, and care by relatives or others in the child's home. Figure 1-5 (below) shows the breakdown of child-care arrangements.

Figure 1-5
Working Parents Rely on A Variety of Child-Care Arrangements



Source: Children's Defense Fund 1992

Housework inequality continues. Studies show that in couples living together, husbands help much more with child care and are more involved in all household tasks than in previous years. Yet 24 percent of employed wives are still saddled with all the household work, and an additional 42 percent do the bulk of it. However, it is likely that the future holds more household equality (Schor 1992).

The nation has invested more money in child care and early childhood development. In 1988, Congress passed the Family Support Act, mandating child-care help for families receiving welfare benefits and participating in job training or educational programs, plus one year of transitional child-care assistance for families leaving the welfare system. In 1990, Congress passed the nation's first comprehensive child-care legislation — creating two child-care programs and improved income supports through tax credits for low-income families with children.

In 1990, Congress also approved a landmark bill that, for the first time, authorized Head Start to expand to serve all eligible children by 1994. When it became clear that appropriations were not large enough to allow Head Start to meet that target, new legislation was introduced to make Head Start a mandatory investment program guaranteeing access for all eligible preschoolers by 1998 (Children's Defense Fund 1992).

The Need for Education in Family and Consumer Sciences

Most young people grow up to be healthy and productive citizens. But too many are shortchanged by complex problems such as poverty, violence, homelessness, drug abuse and the like. Across America, there is growing consensus about the importance of nurturing and strengthening families and investing in our youth. In the area of education, quality family and consumer sciences programs should be integral to the effort to meet the needs of youth and families. Congress has always acknowledged the fundamental importance of the family through funding for home economics education.

In Connecticut, family and consumer sciences programs work to:

- help youth and families function better;
- help prepare students to meet workplace needs; and
- support statewide educational goals that emphasize competence in life skills, early childhood development programs and school-to-career transition.

America's future is dependent on the ability of families and communities to raise our children. With profound demographic, social and economic changes creating problems that threaten to overwhelm us, the need for education in family and consumer sciences is more pressing than ever before.

Programs Work to Help Youth and Families Function

How can the problems that place youth at risk be addressed so that children can learn and families can function better? What responsibilities should be assumed by educators who serve children and families? What responsibilities must schools assume to help prepare our students for a rapidly changing, increasingly complex world?

These are questions that educators, citizens and community and business leaders constantly ask themselves.

Family and consumer sciences programs in schools are a well-established and well-tested delivery mechanism that addresses the complicated issues families face in today's society.

Programs in family and consumer sciences are unique in education in that they address the relationships among individuals, families, communities and the environments in which we function. The *family/consumer* focus of study concentrates on helping youth and families balance work and family responsibilities through courses in specific core topic areas. The *work/career* focus prepares students to enter the work force in one of the core topic areas.

The curriculum embraces family and work issues to help men and women become fully functioning adults and focuses on such persistent social needs as these:

(continued on page 15)

Figure 1-6
Employment Outlook for Selected Family and Consumer Sciences Occupations

Occupational Area	Employment Outlook
Chefs, Cooks and Other Kitchen Workers	Job openings are expected to be plentiful in restaurants and institutional settings, including schools and nursing homes, and *will increase faster than average* due to growth in demand and replacement of workers.
Restaurant and Foodservice Managers	Employment is expected to *increase faster than average*. It will expand due to anticipated growth in the number of eating and drinking establishments, population growth, and increases in the number of families in which both spouses work.
Dietitians and Nutritionists	Growth is anticipated as *average* for all occupations as demand grows for meals and nutritional counseling in settings such as nursing homes, schools and community health programs.
Retail Sales Personnel	Employment is expected to *increase faster than average* through the year 2005 due to anticipated growth in retail sales.
Preschool Workers	Employment is projected to *increase much faster than average*. In addition to the expected increase in the number of children under age 5 between 1994 and 2005, the proportion of youngsters in day care and preschool is expected to increase, reflecting a shift in the type of child-care arrangements parents choose.
Home Health Aides	Job prospects will be excellent as employment is expected to *grow much faster than average*. Changing demographics will play a major role in this growth, with the number of people in their 70s and beyond projected to rise substantially.
Social Workers	Employment is expected to *increase faster than average*. The number of older people who will need to use services is growing rapidly. In addition, services will be needed for the mentally ill, the mentally retarded, and individuals and families in crisis.
Other Human Service Workers — Social Service Technicians, Residential Counselors, Child Abuse Workers and Gerontology Aides	Opportunities for qualified applicants are expected to be excellent because of the projected rapid growth of the occupation and high replacement needs. Employment is expected to *grow much faster than average*.

Source: U.S. Department of Labor 1993

- strengthening parenting skills, especially among teenage parents;
- balancing work and family;
- improving individual, child and family nutrition and wellness;
- understanding the impact of new technology on life and work;
- understanding the effects of economic issues on child development, academic achievement, family relationships, career development, and job performance and satisfaction;
- recognizing the diversity of family structures;
- understanding the complexity and changing character of family roles and tasks;
- improving the responses to individual and family crises such as family violence;
- learning effective coping strategies;
- examining the role of families in the development of individual health; and
- improving and expanding employment and training in areas relating to family and consumer sciences.

Programs Help Prepare Students to Meet Workplace Needs

The *work/career* focus of the family and consumer sciences education curriculum in Connecticut is designed to prepare students for the world of work — in various occupations and in useful, self-supporting roles in society. These courses help young people get jobs in food and hospitality services, restaurant management, child care, the fashion and apparel fields, institutional and home management programs, family and elderly services, and more.

Current and future trends dictate a growing need for workers in a variety of fields related to family and consumer sciences, as illustrated in Figure 1-6 (page 14). According to the 1992-93 *Occupational Outlook Handbook* from the U. S. Labor Department, most of these occupations are expected to grow faster than average through the year 2005.

Programs Support Statewide Educational Goals

One of Connecticut's five *Statewide Educational Goals For Students 1991-1995*, adopted by the State Board of Education in 1990, identifies *competence in life skills* as a key educational priority (see Appendix A, page 110). In part, students who achieve the goal of competence in life skills will:

- demonstrate the ability to make informed career choices;
- understand the responsibilities of family membership and parenthood;
- understand human growth and development;
- understand and apply the basic elements of proper nutrition; and
- understand and develop personal goals and aspirations.

The family and consumer sciences education curriculum is perfectly developed and positioned in schools to help students achieve this goal through courses in the *family/consumer* focus and *work/career* focus.

The program also supports the goals of the State Board of Education as expressed in *Challenge for Excellence: Connecticut's Comprehensive Plan for Elementary, Secondary, Vocational, Career and Adult Education — A Policy Plan 1991-1995* and *Working Together for Student Achievement* (the August 1995 agenda and priorities of the State Board of Education).

The family and consumer sciences education curriculum relates directly to two of the Board's eight policy goals for the five-year period. Goal III — To Ensure Access to Developmentally Appropriate Early Childhood Programs and Services for All Young Children and Their Families — calls for "parent education and training, family support, and child-care services for infants, toddlers, preschool and school-age children" and "recognizes the critical role of the parent as the child's first teacher and as an invaluable partner in the educational process." Goal IV — To Improve Skills for Future Employment — emphasizes an education continuum that includes career awareness and planning, prevocational and employability skills, and vocational and technical training. One of the objectives under this goal emphasizes "student competencies in the knowledge, skills and attitudes necessary for economic self-sufficiency and lifelong learning."

In its 1995 agenda, the Board stressed the importance of "rigorous standards of academic achievement"

in several areas, including "applied education focused on the transition from school to career." The State Board also supported "new, stronger and more innovative long-term partnerships among the home, school and community," and asserted that "schools must be seen as the center of year-round community activities providing preschool, adult education, school-to-career programs, after-school programs and health, nutrition and other social services."

The family and consumer sciences education program in Connecticut plays an important role in pursuing these goals through:

- **Child Study Labs.** Ninety high schools have child study laboratories, according to a 1991 survey by the State Department of Education, Bureau of Applied Curriculum, Technology and Career Information. Students can obtain advanced job skills through these practicum preschools that offer real-life job skills training in fields relating to child care. These practicums are furnished as extensions of classes offered in the core topic area of child development.

- **The GRADS Program (Graduation, Reality and Dual-Role Skills).** GRADS is a nationally renowned secondary program that teaches pregnant teens and young parents about careers as well as prenatal and child-rearing issues. Taught by family and consumer sciences educators, GRADS helps students remain in school through graduation. Family and consumer sciences teachers in 15 schools were developing GRADS programs in 1994, and that number is expected to increase as schools recognize the growing need for these programs.

- **School-to-Career Transition Efforts.** Through the *work/career* focus of family and consumer sciences, local and regional school districts provide programs of study in which reading, writing, mathematics and problem solving are blended into a hands-on, employment-related curriculum. The *work/career* focus emphasizes both basic and advanced skills and allows secondary school students to participate in advanced job skills programs such as Tech Prep and supervised work experience. Tech Prep initiatives in Connecticut include offering college credit for foodservice and child development courses in concert with local community colleges.

27

Program Organization 2

Program Overview

Program Goals

Core Topic Areas

Integrative Components

Program Structure

Special Consideration Programs

This chapter describes the various program elements local districts should consider when reviewing, modifying or developing program offerings in family and consumer sciences education.

Program Overview

The mission of the family and consumer sciences education program in Connecticut is to empower people to effectively manage emerging life issues by applying skills, analyzing options and strengthening interpersonal competencies through an interrelated curriculum. The program enables students to develop skills to manage their own personal, family and career lives and allows them to develop insights into the interaction within families and the relationship of work and family.

The family and consumer sciences education program of the 1990s and beyond will build upon the historical and philosophical foundations of home economics. It will proceed with an interdisciplinary approach combining social services, physical sciences, mathematics, biological sciences, economics, psychology, philosophy and the arts. Additionally, it will integrate academic learning with real-world approaches to teaching authentic tasks in order to prepare students to meet the demands of the changing workplace.

The overall goal of education is to prepare students to function successfully in the multiple roles of citizen, family member, parent, worker and consumer. To do that, the family and consumer sciences program provides two special components: the *family/consumer* focus and the *work/career* focus. Both components provide students with career development skills; job and employability competencies; skills related to the work of the family; and the basic skills of reading, writing, speaking, listening and computation.

Program Goals

The program goals guide the state's comprehensive family and consumer sciences education program, articulating what this program can accomplish. The entire set of core topic areas is directed toward these goals, with each core topic area making a direct contribution.

As outlined in Figure 2-1 (page 19), the program goals are broadly stated to give direction for further curriculum development. They were designed to reflect societal trends and Carl D. Perkins Vocational and Applied Technology Education Act legislative guidelines and can be enhanced to reflect changing trends in education, the work force and the family.

The program goals incorporate the themes interwoven among family and consumer sciences core topic areas — themes known as integrative components. These integrative components, which are described more fully later in this chapter, should be considered the backbone of a quality, comprehensive program in a local school district.

Core Topic Areas

Each core topic area is a link to the development of skills needed to manage one's life in a global society. Core topic areas within the *family/consumer* and *work/career* focuses were developed in 1993 following a careful review of Title III, Part B of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990. They also grew out of identified needs and new directions in education and the family and consumer sciences program area and an in-depth study of current curriculums and timely state and national education reports. Selected curriculums and educational reports examined include:

- *Connecticut Home Economics: A People Centered Curriculum* (State Department of Education 1986);
- *Connecticut's Common Core of Learning* (State Board of Education 1987);
- *Challenge for Excellence: Connecticut's Comprehensive Plan for Elementary, Secondary, Vocational, Career and Adult Education — A Policy Plan 1991-1995* (State Board of Education, April 4, 1990);
- *Applied Education in Connecticut* (State Board of Education 1993);
- *Working Together for Student Achievement* (State Board of Education 1994); and
- *Secretary's Commission on Achieving Necessary Skills* (*SCANS*, U.S. Department of Labor 1991).

Figure 2-1
Family and Consumer Sciences Education Program Goals

Through comprehensive, competency-based programs in the *family/consumer* focus and the *work/career* focus, young men and women will learn to:

- apply academic, critical thinking and communication skills;
- develop occupational and personal skills required for employment;
- manage and conserve individual and community resources;
- make sound consumer and financial decisions;
- build positive interpersonal and family relationships;
- understand and prepare for parenting and child-care responsibilities;
- establish healthy nutritional habits; and
- explore job and career options, including entrepreneurial opportunities.

As a result of this review of key materials, the titles of the core topic areas have been modified somewhat to reflect the new direction of the program. Words such as "technology" (as in nutrition and food technology), "management" (as in foodservice management) or "services" (as in child-care services):

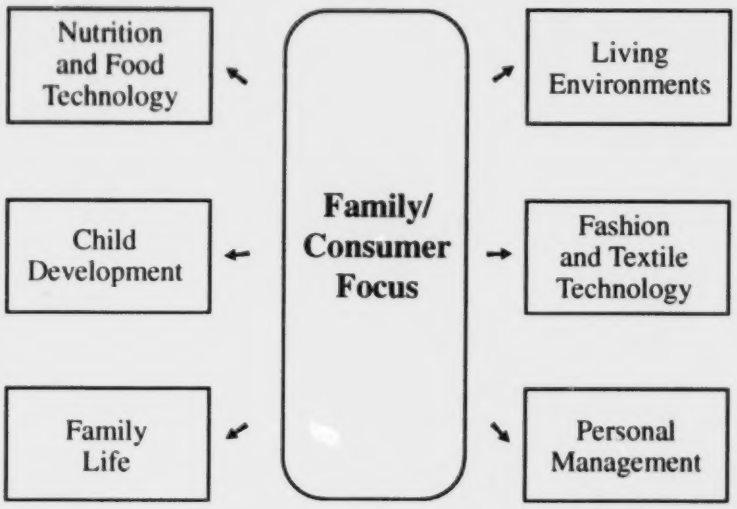
- reflect the field's force as an applied academic study area;
- encourage gender equity in programs and enrollments;
- emphasize incorporation of academics, technology, and employability and workplace readiness skills into the curriculum; and
- underscore the importance of applied learning situations to life and workplace needs.

Core Topic Areas in the *Family/Consumer* Focus

The purpose of the *family/consumer* focus is to prepare young men and women for the transition from school to career, and from youth to adulthood. Students learn to manage their own personal, family and career lives by applying skills, analyzing options and strengthening interpersonal competencies through an interrelated curriculum. The *family/consumer* focus encompasses the following six core topic areas of study related to work and family life:

- nutrition and food technology;
- child development;
- family life;
- living environments;
- fashion and textile technology; and
- personal management.

Figure 2-2
The Relationship of the Family/Consumer Focus to the Core Topic Areas



The relationship of the *family/consumer* focus to the core topic areas is illustrated in Figure 2-2 (above). In general, this focus is designed to address social issues such as:

- the physical, psychosocial, economic and aesthetic well-being of individuals and families;
- the role of individuals and families as consumers of goods and services;
- the development of home and community environments that support individuals and families; and
- the development of employability and workplace readiness skills to assist students in their transition from school to career.

Core Topic Areas in the *Work/Career* Focus

During the last part of high school, the *work/career* focus prepares students for entry-level jobs, advancement in related jobs, and postsecondary education. Instruction is broad based and comprehensive. Delivered through the classroom, it provides work-based experiences to develop skills for employment and balancing work and family. Study in a core topic area furnishes the training necessary to help students get jobs, as listed in Figure 2-3 (page 22).

The *work/career* focus uses varied teaching methods. It addresses work ethics and employability and critical thinking skills, along with specific occupational competencies — to help students prepare for employment. The focus encompasses these four core topic areas of study:

- foodservice management;
- child-care services;
- family and human services; and
- fashion and textile production and services.

The relationship of the *work/career* focus to the core topic areas is shown in Figure 2-4 (page 23).

Integrative Components

Integrative components are the major concepts that unify the content of the core topic areas. The seven integrative components, like the identified core topic areas, resulted from an examination of societal

issues and the documented need for educational reform nationwide and in Connecticut. The core topic areas and the integrative components relate to each other as shown in Figure 2-5 (page 24). The integrative components identified for family and consumer sciences education are:

- individual development;
- roles and responsibilities;
- career awareness;
- critical thinking skills;
- applied academics;
- consumer education; and
- safety and sanitation.

Within each integrative component are broad concepts that provide structure, scope and sequence to these unifying themes. Refer to Figure 2-6 (page 25) for a listing of the broad concepts making up each integrative component.

The first two integrative components — individual development, and roles and responsibilities — are self-explanatory. Values such as reliability, honesty and a strong work ethic must be emphasized if young people are to become fully functioning adults, family members and employees.

The next three integrative components — career awareness, critical thinking skills and applied academics — were selected in response to national reports citing the dramatic changes in today's work force. These reports:

- emphasized the importance of teaching critical thinking skills to enhance problem solving, decision making, creative thinking and reasoning;
- pointed to the need for career awareness and occupational competencies so students can obtain the skills they need to succeed in the world of work; and
- underscored the need for integrated applied programs that teach academic skills in a framework relevant to the real world.

The last two components — consumer education and safety and sanitation — reinforce the need to enhance the quality of our environment. Consumer education addresses the impact of consumer goods and services on people, while safety and sanitation points to actions we can take to ensure safe and sanitary home and work environments.

Program Structure

Education in family and consumer sciences offers a progression of learning based on the developmental needs of students. The recommended program structure describes the organization of courses local district educators can design and offer in order to carry out the mission and goals of family and consumer sciences education. In addition to providing the regular program, teachers — because of their professional preparation — also can provide leadership and instructional expertise in various "special consideration" programs. It is recommended that local district programs include:

- *foundation* and *awareness* at the elementary level;
- *exploratory* offerings at the middle/junior high school level;
- *connect* courses in the *family/consumer* focus for high school students preparing to make the transition from school to career, and from youth to adulthood; and
- *preparation* courses in the *work/career* focus for high school students preparing for occupations related to family and consumer sciences.

The Elementary Level

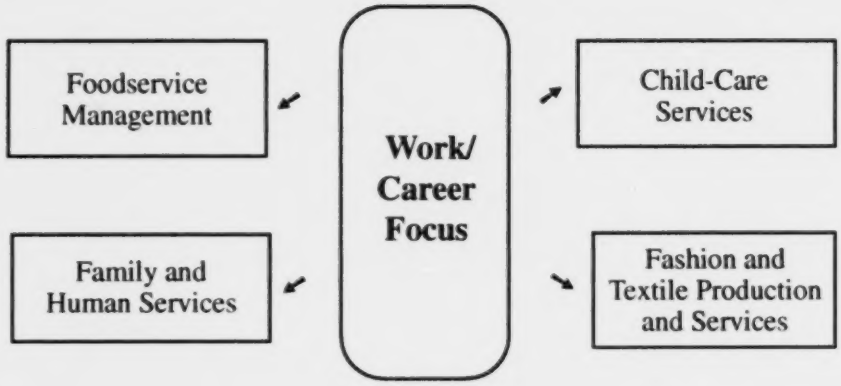
Foundation and *awareness* instruction is generally provided at the elementary level. This instruction introduces students to the study of family and consumer sciences education and gives them appropriate beginning skills and knowledge to manage their lives more effectively. At this level, broad concepts may include getting along with others, developing healthy eating habits, and becoming aware of the role of careers and work in a family context. Hands-on and technology-based activities are encouraged to enhance instruction and stimulate student interest.

Strategies for delivering foundation and awareness instruction may vary from site to site. Some may develop specialized courses, while others may integrate these experiences into the existing course of study. Awareness units should incorporate lessons from all core topic areas, and a family and consumer sciences educator should provide the instruction or serve as a consultant or resource person.

Figure 2-3
Occupational Preparation in the Work/Career Focus

Core Topic Area	Occupation
Child-Care Services	❑ child-care worker ❑ preschool instructor ❑ child-care manager/administrator ❑ child-care aide or attendant ❑ private child-care worker (nanny) ❑ family day-care provider ❑ teacher's aide
Foodservice Management	❑ dining room or counter attendant ❑ food server ❑ cook's helper/kitchen helper ❑ short-order cook ❑ caterer ❑ dietetic technician ❑ food inspector ❑ cake decorator
Family and Human Services	❑ elder-care aide ❑ adult day-care attendant ❑ social service technician ❑ group home worker ❑ senior-center worker ❑ interpreter for the hearing impaired ❑ home health aide
Fashion and Textile Production and Services	❑ fashion sales representative ❑ fashion store manager ❑ retail fashion sales manager ❑ retail and wholesale fashion buyer ❑ fashion coordinator ❑ alteration tailor ❑ custom tailor ❑ designer

Figure 2-4
The Relationship of the Work/Career Focus to the Core Topic Areas



The Middle/Junior High School Level

The family and consumer sciences education program commonly begins at the middle/junior high school level (Grades 5, 6, 7 and 8) and addresses all core topic areas. At this level, the emphasis is *exploratory*, with a focus on the basic understanding of the concepts of individual, work and family.

While delivery of instruction can be in different formats based on local resources and needs, students should be introduced to a wide range of content, knowledge and occupational options. This approach gives learners a better understanding of the scope of the curriculum and helps them focus on specific areas of interest. It also can provide an excellent base for postsecondary programs, including Tech Prep initiatives. (Tech Prep initiatives are discussed in more detail later in this chapter.)

It is important that instruction at this level provide youngsters with a strong foundation for *connect* and *preparation* courses at the high school level.

The effectiveness of the program depends on the time devoted to instruction. At each grade level in middle/junior high school, a minimum time equivalent of a nine-week course, meeting five days a week, is recommended for each grade level. However, more weeks are preferred.

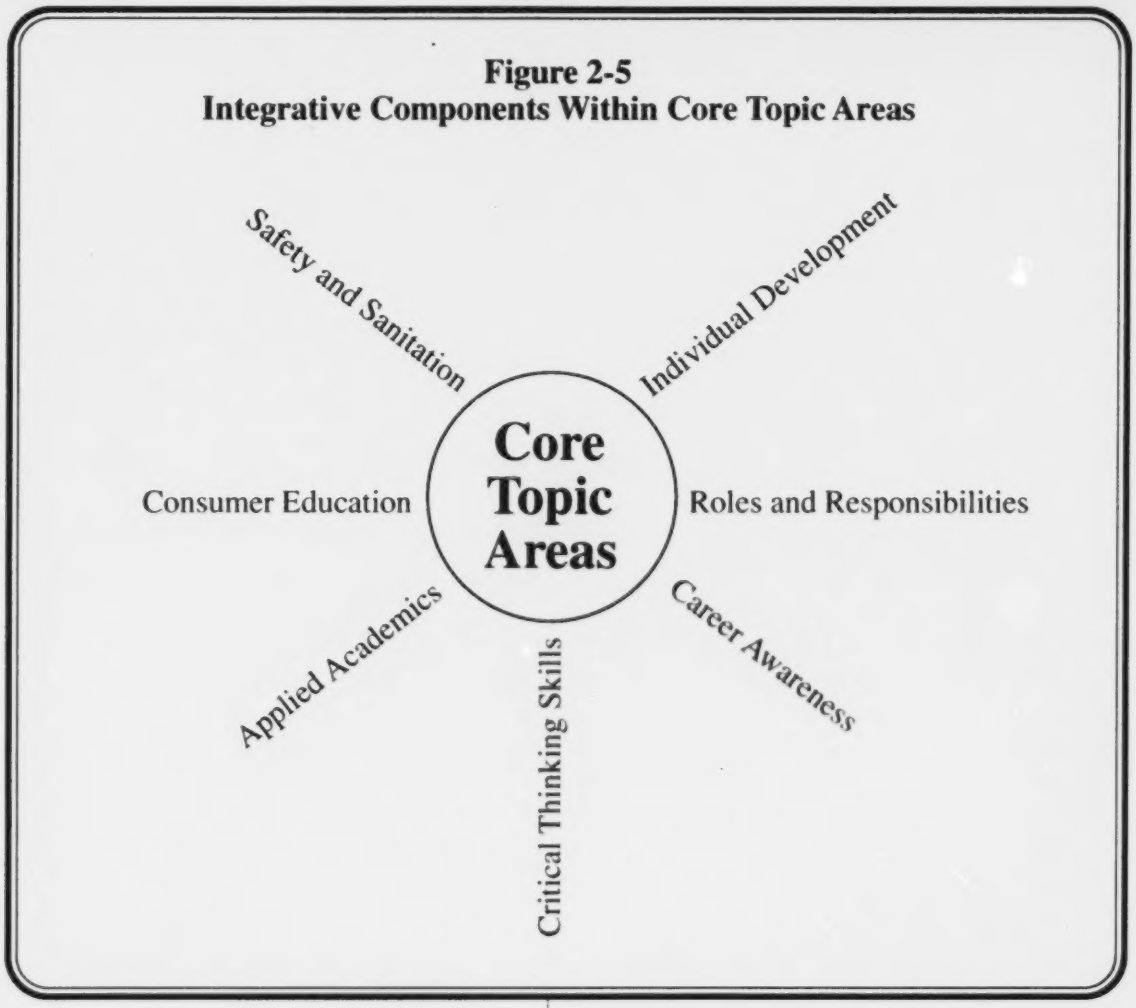
The vocational student organization Future Homemakers of America/Home Economics Related Occupations (FHA/HERO) is an integral part of the program at this level.

The High School Level

Connect instruction and *preparation* for occupations begins at the high school level. Connect courses in the high school *family/consumer* focus emphasize the connections among personal, family and job responsibilities so these aspects of living will complement one another. Specifically, courses should be designed to link the individual to family and work.

The curriculum is presented in a semester model to allow systematic and ongoing study of the core topic areas. It is recommended that all core topic areas be offered for all high school students. Each topic can be offered in a single course or multiple-level courses, or several topics can be combined into a single course.

Figure 2-5
Integrative Components Within Core Topic Areas



The *family/consumer* focus is offered as comprehensive instruction to all students to help develop decision-making skills related to balancing work and family through courses in the core topic areas.

The *work/career* focus is a continuation of *connect* learning to prepare students in Grades 11 and 12 for entry-level jobs, advancement in related jobs, and postsecondary education in related occupations. Courses in the *family/consumer* focus may serve as prerequisites to *work/career* focus courses in order to provide a solid foundation for job preparation and performance.

Program development should help students prepare for careers in rapidly growing service occupations such as child care, retail, family and human services, and restaurant management. One or more of these courses may be offered, depending on regional employment needs.

To simulate the actual work environment, laboratory classes should be scheduled for two periods a day. The work component instruction can be delivered through laboratory simulation or supervised occupational experience. Additionally, Tech Prep college credit can be obtained upon completion of a high school course.

Special Consideration Programs

This section identifies some special consideration programs related to students, communities and vocational student organizations. The list can be expanded to include other programs or services unique to serving students with specific needs in a given school district. In Connecticut, several special programs should be incorporated — such as Tech Prep initiatives, the Graduation, Reality and Dual-

Figure 2-6
Broad Concepts Within Each Integrative Component

Integrative Component	Broad Concepts
Individual Development	self-esteem and self-concept values clarification leadership communication interpersonal skills personal management integrity and honesty
Roles and Responsibilities	citizenship and sense of community productive work roles and lifestyle choices gender equity global awareness personal reliability peer coaching
Career Awareness	attitudes vocational planning interest assessment employability or economic adaptability skills and aptitudes
Critical Thinking Skills	reasoning and creative thinking resource evaluation goal setting intellectual curiosity decision making and problem solving forecasting
Applied Academics	language arts mathematics the arts (fine and practical) sciences cultures social studies/geography/history technology
Consumer Education	personal/business finances resource management advertising and marketing awareness entrepreneurship technologies living/occupational environments
Safety and Sanitation	health care personal protection environmental safety sanitation

Role Skills (GRADS) Program for pregnant and parenting teens, and the Future Homemakers of America/Home Economics Related Occupations (FHA/HERO) student organization.

Tech Prep Program

Tech Prep was introduced to the state in 1990 as a combined secondary and postsecondary educational program designed to prepare students for occupational careers. It consists of two years of high school combined with two years of college or apprenticeship. Tech Prep provides a technical education that parallels college prep and is targeted — but not limited — to the middle majority of high school students.

Programs provide a foundation of applied academics, courses incorporating hands-on experience, and real-life applications. They also provide the occupational skills needed for careers. Individual or sequenced occupational courses can be included as part of the Tech Prep program sequence. Courses may be coordinated into a Tech Prep program with the local community-technical college, and students can earn college credit toward a planned program in the occupational area selected.

For more detailed information on Tech Prep programs, see Chapter 5. If your school wants to make these programs available in such areas as child-care services, family and human services, nutrition and food technology, and fashion and textile production and services, contact the Tech Prep program manager at the Connecticut State Department of Education.

GRADS Program

The GRADS program, a nationally recognized course of study for expecting teens and teen parents, can be offered *only* through the family and consumer sciences education program. It is taught by a family and consumer sciences educator.

In the program, students remain in school through graduation, learning about prenatal care, developing practical parenting and child development skills, gaining an orientation to work, and learning how to balance work and family needs.

A school may offer a daily class structure, an alternative class structure, or both. The daily class structure — which provides the most desirable learning environment — is recommended when eight or more eligible students can be scheduled into a daily class that meets at least 200 minutes a week.

To make the GRADS program accessible to as many eligible students as possible, the alternative class structure is used when the projected number of students is less then eight, when student schedules are not compatible with the traditional daily class structure, or when the distance between participating schools prevents daily teacher travel between schools. Students in the alternative class structure must be scheduled into a GRADS class that meets at least 80 minutes per week. Since criteria require 200 minutes per week, each GRADS student then will spend the rest of the time participating in monthly seminars and in planned individualized activities.

Teachers receive comprehensive training and a detailed curriculum for this program, which is a documented success. For more information on starting a GRADS program in your school, contact the education consultant in the family and consumer sciences education program at the Connecticut State Department of Education.

FHA/HERO Student Organization

FHA/HERO is the applied education student organization for students enrolled in family and consumer sciences courses. It functions as an integral part of instruction by applying classroom learning to real situations — fostering leadership, personal development, community service and business involvement.

GRADS teachers are encouraged to integrate FHA/HERO into the GRADS curriculum through in-class activities. GRADS students also may participate in local, state and national FHA/HERO events. See Chapter 3 for further information on FHA/HERO.

Curriculum Development 3

Factors Influencing Curriculum Development

The Curriculum Development Process

FHA/HERO as an Integral Part of the Curriculum

Current Perspectives on Teaching and Learning

The curriculum development process described in this chapter can help guide local district personnel as they review, modify or develop family and consumer sciences education program offerings. This chapter addresses factors influencing curriculum development, recommended steps in the curriculum development process, integration of FHA/HERO into the curriculum, and current perspectives on teaching and learning that affect curriculum development.

Factors Influencing Curriculum Development

Curriculum development for consumer and family sciences education involves integrating diverse topics, skills and disciplines into a comprehensive curriculum. Over the past decade, the implementation of a comprehensive family and consumer sciences education program has been affected by outside influences, including:

- **Lingering misconceptions about the curriculum**. Strong steps have been taken to correct dated perceptions of what was formerly called home economics in Connecticut. Members of the profession need to continue to educate and inform the community about the family and consumer sciences education program and stress the critical need for ongoing education in this area.
- **Changing societal trends affecting the family.** Curriculum development efforts must respond to major national and local trends. These changing social, technological, demographic and economic conditions affect the way family and consumer sciences education is taught.
- **Educational reform**. Educational reform calls for all courses to emphasize the school-to-career transition, career development and employability skills. Subjects also must be more demanding in the application of languages, English, the sciences, mathematics and computer technology.

Because of these influences and challenges, family and consumer sciences education is a critical subject area that must be taught effectively. The successful outcome of local curriculum development efforts will depend heavily on sufficient staff members with appropriate expertise, a broad base of consumer support and agreement on the curriculum.

Successful curriculum development efforts also will depend heavily on applying current educational trends to the teaching/learning process. These include an awareness of contemporary teaching/learning theories, an appreciation for the different ways people learn, and the application of teaching techniques that use critical thinking skills. More information on these subjects is provided later in this section.

The Curriculum Development Process

The actual task of curriculum development can be accomplished in three major phases as outlined in Figure 3-1 (page 29).

Phase 1: *The Curriculum Planning Process*

Phase 1 in developing or revising the curriculum involves the planning process. This phase can be broken down into a series of steps, each of which is identified with an arrow (⬇).

⬇ Establish a Curriculum Development Advisory Committee

Selecting a broad-based curriculum development advisory committee is one way to encourage participation in the planning process — which leads to an effective program. This committee will provide the scope of the program's development to help ensure a comprehensive and sequential program. The following individuals should be invited to serve on this committee:

- central administrator
- secondary administrator
- family and consumer sciences/home economics teachers
- special education teacher
- social worker
- parents
- students
- community leaders
- business and industry leaders
- guidance staff member

(continued on page 30)

Figure 3-1
The Curriculum Development Process

Phase 1: ***The Planning Process***

Establish a Curriculum Development Advisory Committee

⬇

Conduct a needs assessment

⬇

Establish a working subcommittee

⬇

Revise or develop a mission statement and goals

⬇

Select the focus and core topic areas for family and consumer sciences education

⬇

Determine student competencies and teaching techniques

⬇

Identify educational resources

Phase 2: ***Implementing the New or Revised Curriculum***

Conduct an advisory committee review of the proposed curriculum

⬇

Conduct an internal review of the proposed curriculum

⬇

Propose staffing

⬇

Plan and conduct staff development

⬇

Acquire materials and resources

⬇

Pilot the program

Phase 3: ***Evaluating the New or Revised Curriculum***

Evaluate student performance

⬇

Evaluate the overall program

Once the committee has been named, an action plan and a time line for completing the major tasks need to be established. Listed below are some guidelines that must be considered as the committee addresses its comprehensive family and consumer sciences education curriculum:

- Written goals and student competencies for all grades should be prepared.
- The curriculum should be organized in an ongoing, systematic way, with the selected competencies evolving from one grade level to the next and instruction provided equitably across each grade or course.
- The curriculum should include the core topic areas in the family/consumer focus and also may include the core topic areas in the work/career focus.
- Courses must be offered in a sequential order with the building of concepts and content from the elementary grades through high school. The structure shown in "Organizing Program Topics," Chapter 4, provides a format to follow.
- Program goals and integrative components should be incorporated into the curriculum. Both program goals and integrative components are described in detail in Chapter 2.
- Instruction must be given by teachers certified in family and consumer sciences/home economics education, and sufficient financial support should be made available to implement an effective program.

⬇

Conduct a Needs Assessment

Next, the committee needs to assess what is already in place and to determine what is needed. Consulting with teachers, administrators, students and community members, the committee can determine areas of duplication and unmet needs, gaps in programs, and other strengths and weaknesses. This information will guide the committee in its curriculum development process.

How should the committee collect the necessary information? Interviews with teaching staff members and administrators, and checklists and questionnaires are excellent choices. The checklist in Figure 3-2 (page 31) can be used as a guideline in the review of existing curriculum.

When all necessary data is gathered, the committee should assess it carefully. Using this information, the committee should now decide either to revise the existing curriculum or develop a new one.

⬇

Establish a Working Subcommittee

To develop a comprehensive curriculum efficiently, a working subcommittee should be established, consisting of family and consumer sciences/home economics teachers, guidance personnel, and other academic teachers — with possible help from specialists in social work, special education and administration.

⬇

Revise or Develop a Mission Statement and Goals

A well-developed mission statement and clearly articulated goals are the backbone of a quality, comprehensive program. They will articulate why education in family and consumer sciences is essential and what the program attempts to accomplish.

This step in the planning process should begin with a review of the national vision statement for vocational home economics education (page 3), as well as Connecticut's mission statement (page 3) and program goals (page 19). The local mission statement should:

- address the needs and concerns of children and families in the local school district;
- reflect current trends in education, the family and the work force; and
- be consistent with the state's and local district's general educational goals for students.

⬇

Select the Focus and Core Topic Areas for Family and Consumer Sciences Education

The *family/consumer* focus will be central to each district's program, while the *work/career* focus will be included in districts where occupational programs are offered. See Chapter 2 for a detailed discussion of core topic areas within each focus.

(steps continue on page 32)

Figure 3-2
Curriculum Development Checklist

		Yes	No
1.	Is a written curriculum now available? (If the answer is yes, continue.)	❑	❑
2.	Has the present curriculum been evaluated or revised in the past two years?	❑	❑
3.	Does it reflect current educational and societal trends in family and consumer sciences?	❑	❑
4.	Does it address risk factors and areas of concern regarding issues relating to work and families in your school district?	❑	❑
5.	Is it skill based?	❑	❑
6.	Is it multicultural and gender sensitive?	❑	❑
7.	Are career development and employability skills emphasized?	❑	❑
8.	Does it reinforce the application of English, science, math and technology?	❑	❑
9.	Are teaching techniques used that foster critical thinking skills?	❑	❑
10.	Does the curriculum contain a written mission statement and set of goals?	❑	❑
11.	Do the goals reflect the mission statement?	❑	❑
12.	Do the student competencies reflect the goals?	❑	❑
13.	Are student competencies appropriate, developmental and sequential?	❑	❑
14.	Do the competencies reflect the integrative components adopted for family and consumer sciences education?	❑	❑
15.	Do educators at each grade level teach all of the student competencies?	❑	❑
16.	Are appropriately certified educators teaching family and consumer sciences?	❑	❑
17.	Do all special education students have competencies similar to those of regular education students?	❑	❑
18.	Are materials available to teach the stated competencies successfully?	❑	❑
19.	Have teachers received in-service training to update their skills and knowledge?	❑	❑
20.	Have all students been exposed to similar educational experiences?	❑	❑

⬇

Determine Student Competencies and Teaching Techniques

Student competencies should reflect the needs assessment, mission and goals of the program, and must respond to the risk factors in the community and society at large. Ultimately, identified competencies and the teaching techniques used should reinforce program goals that emphasize, for instance:

- applying academic, critical thinking and communication skills;
- developing occupational and personal skills required for employment;
- managing and conserving individual and community resources;
- making sound consumer and financial decisions;
- building positive interpersonal and family relationships;
- understanding and preparing for parenting and child-care responsibilities;
- establishing healthy nutritional habits;
- exploring job and career options;
- applying preventive actions to ensure a safe and sanitary home and work environment;
- promoting gender equity; and
- appreciating diverse populations.

⬇

Identify Educational Resources

There is a wide range of excellent resource materials on family and consumer sciences education, including textbooks and other instructional materials such as video and software packages. These can be combined with up-to-date teaching materials provided by special organizations and media centers.

Phase II: *Implementing the New or Revised Curriculum*

Phase II involves implementing or establishing a new or revised curriculum. This phase can also be broken down into several distinct steps, each of which is identified with an arrow (⬇).

⬇

Conduct an Advisory Committee Review of the Proposed Curriculum

The advisory committee should review materials periodically throughout the curriculum development process. At this time, the entire committee should review the completed document and make necessary revisions.

⬇

Conduct an Internal Review of the Proposed Curriculum

The curriculum committee should allow reasonable time and opportunity for administrators, teachers, students and school board members to review the proposed curriculum.

⬇

Propose Staffing

The curriculum committee should develop a staffing plan based on anticipated enrollments for the family and consumer sciences education program. The optimal situation is to staff each school with an education coordinator certified in family and consumer sciences education to oversee the program. Failing that, a coordinator should be designated within the district to be responsible for identifying critical tasks and making recommendations to the administration. This appointment would depend upon the qualifications of the current staff.

⬇

Plan and Conduct Staff Development

The curriculum development committee should plan staff development workshops that provide training for all affected personnel. All staff members, including guidance personnel, should receive an overview of the curriculum and information on critical issues. Administrators should receive training on issues that may arise as the curriculum is implemented. Regardless of the curriculum developed or selected, the effectiveness of the program will correspond with the level of training and effectiveness of the staff.

⬇

Acquire Materials and Resources

Before a curriculum can be implemented, all facilities, materials and other resources required to teach the program must be acquired or identified. Materials should be made available to teachers immediately, giving them adequate time for review and preparation.

⬇

Pilot the Program

During the first year of new courses, the curriculum should be piloted with the knowledge that it may need modification after the initial start-up period.

Phase III: *Evaluating the New or Revised Curriculum*

Evaluating the family and consumer sciences education curriculum is a significant component of the implementation process. It is essential that districts with fluctuating budgets, increasing pressures on the school day, and changing student needs plan ahead for curriculum evaluation. The two steps associated with evaluation are indicated with an arrow (⬇):

⬇

Evaluate Student Performance

The committee needs to provide a way to evaluate student performance. Journals, student portfolios, presentations to class, research reports, lab observations, construction projects, traditional knowledge and theory tests, and many other methods can be designed to evaluate the learner's skills. As a guide, the committee should refer to the *Performance Measures and Standards* document developed for the family and consumer sciences education curriculum (see Appendix B, page 112). It outlines measures, standards and suggested student assessment methods for each core topic area.

⬇

Evaluate the Overall Program

Evaluation of the curriculum often is viewed simply as a measure of student gains in knowledge. However, well-developed family and consumer sciences education curriculum should be assessed using the results of the student *Performance Measures and Standards* (see Appendix B, page 112) and the Curriculum Development Checklist on page 31.

FHA/HERO as an Integral Part of the Curriculum

Future Homemakers of America/Home Economics Related Occupations (FHA/HERO) is a national student organization that helps young people become leaders and assume positive roles in their families, at work and in their communities. It addresses important personal, family, work and societal issues through applied family and consumer sciences education programs. Membership is open to all students who are enrolled, or have taken a course, in family and consumer sciences education at the middle/junior high and senior high school levels.

Key issues targeted by members include teen pregnancy, parenting, family relationships, peer pressure, nutrition, financial fitness, intergenerational communication, the environment, community service and career exploration. Programs are implemented through the family and consumer sciences education curriculum through co-curricular chapters, with one or more advisers per school. Schools form chapters that affiliate with state and national organizations.

Instruction and chapter activities are closely related, as shown by the organizational mission and purposes outlined in Figure 3-3 (page 34). Since instructional activities can be used inside and outside the class to enhance classroom learning, educators are encouraged to integrate FHA/HERO into classroom instruction. Membership in FHA/HERO allows students to learn family and consumer sciences skills by becoming involved in chapter management and activities; planning and participating in group or individual projects; or becoming committee members, officers or chapter representatives.

Figure 3-3
Future Homemakers of America/Home Economics Related Occupations (FHA/HERO)

Mission

To promote personal growth and leadership development through home economics education. Focusing on the multiple roles of family member, wage earner, and community leader, members develop skills for life through:

- character development;
- creative and critical thinking;
- interpersonal communication;
- practical knowledge; [and]
- vocational preparation.

Purposes

- to provide opportunities for personal development and preparation for adult life;
- to strengthen the function of the family as a basic unit of society;
- to encourage democracy through cooperative action in the home and community;
- to encourage individual and group involvement in helping achieve global cooperation and harmony;
- to promote greater understanding between youth and adults;
- to provide opportunities for making decisions and for assuming responsibilities;
- to prepare for the multiple roles of men and women in today's society; [and]
- to promote home economics, home economics careers and related occupations.

Current Perspectives on Teaching and Learning

Local school districts need to review and apply current educational viewpoints and practices as they begin to revise or develop the family and consumer sciences education curriculum. Information presented in this section can provide the reader with a brief overview of *a sampling* of contemporary educational viewpoints on the teaching/learning process. It is not complete, nor does it represent all prevailing theories and practices.

This section discusses current teaching/learning theories, learning style models, teaching techniques, methods for using critical thinking skills and the use of portfolios.

Current Teaching/Learning Theories

The teaching/learning process drives much of what we do in the name of educational practice. During the 1980s, the shape of educational practice slowly

began to change, as an enhanced, interrelated view of teaching and learning was embraced. Some aspects are newer beliefs based on contemporary theories of learning; others are based on theories in existence for many years. All have implications as we plan, revise or enhance family and consumer sciences education curriculums to suit learning needs and new educational practices. Some of the prevalent teaching and learning theories subscribed to today are described below.

Learning requires the learner to actively construct meaning. Learners construct meaning by taking new information, relating it to their prior knowledge, and then putting their new understanding to use in reasoning and problem solving. Although learning theorists have held this view for many years, concerted efforts have been made only recently to help implement this theory.

Students' prior understanding of a topic exerts a tremendous influence on what they learn during instruction. One of a teacher's most important tasks is to explore the conceptions that learners bring to the classroom and help them achieve a new, more refined understanding of these concepts. In addition, a teacher must provide experiences that help learners recognize inaccurate pre-existing conceptions — in order to help change these misconceptions.

The teacher's primary goal is to generate a change in the learner's cognitive structure. The most important factor in determining how much a student learns is not observable behavior, but the *learner's cognitive processing structure* — or way of viewing the world. While changes in observable behavior are important, since they can suggest that the learner's cognitive structure has changed, they are not an indicator of the learning itself.

The teacher cannot do the work of the learner since learning is a process of active construction. Students must do the work of learning. The teacher's task is to help learners acquire the skills needed to carry out the work of learning. The teacher's task also involves motivating students to engage in appropriate thinking during instruction.

Learning in cooperation with others is an important source of motivation, support, modeling and coaching. In contrast to the traditional view of learning as a solitary process, new views recognize the important role that peers can play by sharing the responsibility for the learning of all group members. Evidence suggests that students learn more when engaged in cooperative learning activities structured to include both group interdependence and individual accountability.

Content-specific learning and thinking strategies play an important role in learning. Until the past decade, much of the research on learning focused on learning strategies and skills that were general in nature and applied across subject matter. However, in the past few years, the pendulum has swung toward an increasing emphasis on content-specific learning and thinking skills.

Learning Style Models

To succeed in today's demanding world, students need to be better prepared than ever before. Part of that preparation is learning to form positive attitudes about learning. In fact, students who learn how to study using their preferred learning style or styles have demonstrated significant improvement in academic achievement and their attitudes about school.

People learn in different ways, regardless of intelligence. There are many ways to grasp information, and individuals learn more rapidly when their learning styles are well suited to the way they receive and process information.

Family and consumer sciences educators need to recognize students' learning preferences and provide opportunities to make use of those individual styles. Teachers then can adapt methods and materials to their students' needs, using a variety of techniques to present new information.

Learning style models were developed by education pioneers who recognized that individuals differ in the ways they learn. Most children show a preference for one or more of the following basic learning styles: visual, auditory, kinesthetic or global. Learning is situational, however, and people may prefer different styles in different situations. Some basic characteristics of learning styles are described in Figure 3-4 (page 37).

Choosing Teaching Techniques

Students enjoy and benefit from a variety of techniques that teachers use to help students learn. But not all effective techniques have been "invented." Both teachers and students should continually try to find new techniques that emphasize critical thinking skills, active participation and a degree of reality.

Family and consumer sciences educators should keep the following points in mind:

- **Teaching techniques should not focus on "what" to think but on "how" to think** — through problem-solving strategies. If a student is participating mentally as well as physically, his or her interest will be greater and achievement more rapid.
- **Varied teaching techniques should be used** to reach students who have a range of learning styles. Techniques that help a student succeed will enhance his or her self-esteem.
- **Motivation and learning are increased if the student has a personal interest in the success of the technique and sees usefulness in his or her learning activities.** Moreover, if a student finds pleasure in the learning situation, she or he is more likely to continue learning.
- **A student who develops skills for independent learning will be more likely to continue learning independently.** When a student continues learning activities, outside school and without pressure, it is often because the school activities were meaningful and motivation was heightened.

Several examples of teaching techniques are shown in Figure 3-5 (page 38).

Figure 3-4
Learning Style Models and Characteristics

Learning Style	Characteristics
Visual	Visual learners learn by watching, and will call up images from the past when trying to remember. They make pictures in their heads and use visual words to describe shape, form, color or size; they learn new information well from viewing videos, exhibits, charts, maps, or graphs. Subjects such as spelling and algebra often come easily for visual learners, who can see or picture the word or problems.
Auditory	Auditory learners often spell phonetically — the way a word sounds — and can have trouble with reading, because they do not visualize internally. Instead, they learn by listening. They converse frequently, sometimes having conversations aloud with themselves. Auditory learners like to talk things over and do well in areas in which participants contribute verbally. They imagine how things sound and remember facts best when they are presented in a poem, song, or rhyming melody. About 80 percent of all secondary instruction is delivered by auditory methods such as lecture; yet less than 10 percent of secondary students show this to be their strongest style.
Kinesthetic (Manipulative)	Kinesthetic learners learn best through movement and manipulation. They like to find out how things work and are very successful at the practical arts. For example, when given a choice to write a book report or to create a scene from the book, they will often choose the latter. Although kinesthetic learners may have difficulty learning in a traditional classroom setting — where emphasis is often placed on sitting still and either watching or listening — they can learn to read and follow directions through the use of recipes or other active projects. Many of these "nontraditional" learners are successful using hands-on activities.
Global	Analytical learners — traditionally known as left-brain thinkers — start with small amounts of information which they put together to get the entire picture. In contrast, global or "right-brain" thinkers start with the whole picture or puzzle and then take it apart to examine the components. Global learners tend to be less successful in a standard school setting, but more successful in nontraditional settings, as are kinesthetic learners. Many global learners tend to be creative, move around a lot, doodle and fix things. They can have difficulty following complex sets of instructions and may need frequent breaks. Unfortunately, such students have tendencies to develop negative perceptions of school and themselves, especially when their needs are ignored.

Adapted, with permission, from "Using Learning Styles To Empower Youth And Families" by Nancy R. Spinner. *Journal of Home Economics* (Fall 1992): 8-11.

Figure 3-5
Teaching Techniques and Examples

Technique	Examples
Case Study	❒ Case study or problem ❒ Observation record
Discussion Techniques	❒ Class or general discussion ❒ Circle discussion ❒ Listening teams* ❒ Small group discussion ❒ Panel or round table ❒ Symposium ❒ Forum ❒ Colloquium ❒ Question and answer ❒ Debate teams* ❒ Brainstorming ❒ Quotations or cartoons* ❒ Action maze* ❒ Considering alternatives* ❒ Socratic questioning* ❒ Critical incident* ❒ Group work
Dramatized Experiences	❒ Sociodrama or role playing ❒ Skits or pantomime ❒ Dramatization*
Individual Study	❒ Programmed learning ❒ Supervised study
Experiences Outside the Classroom	❒ Field trip ❒ Interviewing ❒ Paid work experience ❒ Volunteer work ❒ Citizen participation ❒ FHA/HERO Chapter activities
Showing, Telling and Trying Out	❒ Exhibit ❒ Laboratory and experimentation ❒ Demonstration, speaking or directing ❒ Report
Fun, Imagination and Creativity	❒ Inventing* ❒ Games ❒ Jingle writing ❒ Projective techniques ❒ Creative visualization* ❒ Scenario building*
Projection Techniques	❒ Filmstrip, slide or overhead ❒ Video or film ❒ Computer ❒ CD-ROM
Other	❒ Lecture ❒ Recitation ❒ Learning packages ❒ Examinations ❒ Supervised study and drills

* These teaching techniques are discussed further in the following section, "Teaching Techniques that Foster Critical Thinking Skills."

Fostering Critical Thinking Skills

Note: This discussion of critical thinking skills, which concludes on page 43, was adapted, with permission, from "Critical Thinking: Enhancing Adolescent Decision Making" by Jo Jones and R. Dale Safrit. *Journal of Home Economics* (Fall 1992): 4-7, 52.

Why encourage adolescents to think critically? Because they need to be prepared to address the complex issues they will face today and in the future.

Critical thinking is an essential element of problem solving, decision making, and evaluating one's position on issues. Critical thinking is not an esoteric mental operation, but an essential component of everyday thought and deliberation. Critical thinking is:

- An internal dialogue of questions such as: "Do I agree with what is being said?" "Based on what I know, is the statement true?" "How do I really feel about what is being said?" or "What implications does this decision have for me and my future?"
- An alternative to making decisions by blind acceptance, impulse or whim, or simply "going along with the crowd."
- The ability to see that problems may have many solutions, and the ability to imagine and explore alternatives.

Key elements in the critical thinking process are dialogue, reflection and questioning. Dialogue can occur within an individual's mind or between two or more learners. The questioning technique is effective if questions are probing and go beyond a memorized response. Research indicates that about 60 percent of teachers' questions require students merely to recall facts, another 20 percent are procedural, and only 20 percent require students to think.

Family and consumer sciences educators must teach appropriate subject matter while helping students learn to analyze and resolve problems and issues. To foster critical thinking in adolescents, learning environments must:

- provide opportunities for young people to consider the strengths and weaknesses of opposing points of view;
- actively involve adolescents in evaluating alternative solutions to real-life situations;
- provide opportunities to reflect on, discuss and evaluate personal beliefs and actions;
- raise ethical questions about various consequences of actions and decisions; and
- encourage dialogue among adolescents and adults about contradictions in thoughts, words and actions.

Additionally, learning environments must generate thought-provoking questions — with a focus on "how" and "why," as opposed to "what." The emphasis needs to be on developing problem-solving strategies, rather than on conforming to the "right" answers.

There are numerous teaching techniques that educators can use to foster critical thinking skills in adolescent learners. Thirteen such techniques are described on pages 40-43.

Teaching Techniques that Foster Critical Thinking Skills

Strategy	Description and Examples
Critical Analysis	Individual learners (or small groups of learners) critique material related to a specific topic or issue. For example, when discussing the importance of good nutrition, teachers could ask teenage learners to read and critique newspaper and magazine advertisements for fad diets or weight-reduction products. Questions such as the following might be considered: ◆ Which parts of the advertisements do you believe are fact? ◆ Which parts do you believe are fiction? ◆ Why would a teenager purchase this product? ◆ Whose interests are being served in the advertisement?
Debate Teams	Learners are assigned to one of two opposing teams, one in support of a specific issue and the other opposed. Team members from each side present evidence and reasons in support of their team's position. For example, students could debate the pros and cons of completing a high school education by discussing: ◆ What are the benefits of staying in school and receiving a diploma? ◆ What benefits are realized by dropping out of school? This strategy is most effective if learners are asked to serve on teams whose positions differ from their own.
Dramatization	This strategy relies upon dialogue and action to assist learners in interpreting and analyzing situations. It differs from role-playing in that it requires a longer period of time and a holistic, well-developed plot. Members of the group can create the dramatized scene, or portions of prerecorded television shows or videos can be used. An example of dramatization involves prerecorded segments of a popular television drama. The teacher shows a videotaped segment of an episode. After viewing enough of the segment to develop a basic understanding of the situation, small groups write the remainder of the script and then act out the alternative ending.

(continued)

(Adapted, with permission, from Jones and Safrit 1992)

Teaching Techniques that Foster Critical Thinking Skills (continued)

Strategy	Description and Examples
Action Maze	This alternative provides excellent instructional formats for fostering decision-making skills in learners. Participants are divided into groups of two or three members. Each group is given a specific situation as part of a larger issue to be explored. Each group member develops at least two responses to the situation and must identify the consequences of each alternative. The group's situation is recorded on a small piece of poster paper. Group members write each alternative response on the front sides of individual adhesive notes that are attached to the poster paper. These may be lifted to reveal the consequences of each individual response, written directly on the poster paper. When completed, the action mazes are exchanged among teams. Another team reads the first team's situation, chooses an alternative response, identifies its own consequences, and then compares its consequences with those of the original group.
Critical Incident	This option involves presenting the most dramatic or important part of a critical situation or issue to a group of learners, who must resolve it. The facilitator has complete information about the situation, but shares it only in response to direct questions from the learners. After the learners share their solutions, the facilitator points out key points the learners may have overlooked. The critical incident strategy emphasizes the importance of gathering complete information before making decisions.
Scenario Building	With this strategy, learners develop a detailed written description of a specified situation. The facilitator provides them with questions to address as they build their scenarios and guides them in setting goals and determining strategies.
Socratic Questioning	This strategy involves the use of the "right" questions, as opposed to those that require a "yes" or "no" answer or those that ask learners to repeat information they have received. Such questions require only recall, not the processing or synthesis of information. In contrast, Socratic questioning can facilitate the exchange of ideas and viewpoints, give new meaning to content, explore applications to problems, and provide implications for real-life situations. The following are illustrations of Socratic questions: "If this situation happened to you, what would you do?" "That's one possible answer to the problem, but can you think of another possible solution?" "What impact will that decision have on your life?" "Why did you come up with that solution to this problem?"

(continued)

(Adapted, with permission, from Jones and Safrit 1992)

Teaching Techniques that Foster Critical Thinking Skills (continued)

Strategy	Description and Examples
Creative Visualization	In this case, participants are asked to think ahead to a situation they might be in someday. With learners' eyes closed and bodies relaxed, the facilitator helps them create a mental image of the situation, setting the stage by asking questions that create a visual picture of the situation and the accompanying emotions. Creative visualization could be employed by asking learners to imagine themselves in a specific situation. The participants are asked to visualize the answers to questions such as "What do your surroundings look like?" "What are you doing with your time?" "What would you be doing right now if you weren't here?" "Have your personal values changed as a result of this experience?"
Listening Teams	In this instructional strategy, the facilitator divides learners into several listening teams prior to a lecture or panel discussion on an issue. Each team is assigned a specific listening task. At the conclusion of the presentation, each team asks questions or presents reactions related to the task for which it was responsible. The class can be divided into three listening groups: one that listens for the feelings the speaker communicates, another that focuses on the advice the speaker presents, and a third that identifies any regrets the speaker conveys or implies.
Journal Writing	Learners are asked to keep a journal or diary between group sessions to encourage them to reflect on personal actions and behaviors that relate to the program topic. For example, as part of teaching money management and financial planning, a teacher could ask adolescent learners to keep a "spending diary."
Quotations or Cartoons	A teacher uses quotations and cartoons to encourage critical thinking and questioning among learners. The material could be displayed in the classroom for learners to read during breaks, or it could be included in mailings and newsletters. Group discussion increases the effectiveness of this strategy and can be initiated by such questions as "What does this cartoon say to you?" or "How does this cartoon relate to your personal life?"

(continued)

(Adapted, with permission, from Jones and Safrit 1992)

Teaching Techniques that Foster Critical Thinking Skills (continued)

Strategy	Description and Examples
Inventing	The facilitator asks the learners to invent new items or products and to describe their attributes. Students may work individually or in small groups to develop their ideas. For example, as part of exploring potential jobs and careers, they might invent the "ideal" job and explain why they incorporated specific characteristics into the design of their new "product."
Considering Alternatives	One way to analyze various alternative solutions to a situation is to identify the *p*luses, *m*inuses and *i*mplications (PMI) of each alternative. Learners may work individually or in small groups. The analysis involves listing and discussing these aspects of a particular decision for an individual, group, family or entire community. When possible, the facilitator may lead the entire group in discussing the highlights of small-group discussions.

Adapted, with permission, from "Critical Thinking: Enhancing Adolescent Decision Making" by Jo Jones and R. Dale Safrit. *Journal of Home Economics* (Fall 1992): 4-7, 52.

Developing Portfolios

Portfolios containing an assortment of students' work are popular today as an interactive, visual tool to assess student performance. They foster in students a sense of ownership of their work; encourage different learning styles; can be used as a tool for discussion with peers, teachers and parents; provide opportunities for students to trace the development of their learning; and support individuality and cultural diversity.

Portfolios can be designed or organized in many different ways, can be tailored to meet any goal or criteria, and can pertain to any content area. Methods for evaluating portfolios will depend upon the educator's goals. Refer to Figure 3-6 (page 44) for information on how to get started with a portfolio system.

Figure 3-6
Getting Started with a Portfolio System

Major Questions	Possible Answers
How will the portfolio be used?	❑ As part of the final evaluation grade? ❑ For parent conferences? ❑ To follow the student throughout his or her schooling? ❑ As a reflective piece for students to look back at their work and see their own development? ❑ As a school or district accountability piece for comparing, using pre-established criteria? ❑ For self-evaluation by the student? ❑ To be used by students for job interviews? ❑ To be passed on to the next teacher?
What pieces should be included?	❑ Will finished products, works in progress or "best work" be included? ❑ Will teachers and students share in the selection process? ❑ What specific pieces of student work will be included?
How will the portfolio be evaluated?	❑ Will grades be determined based on criteria set by the teacher alone, or by the teacher and student(s)? ❑ Is student work to be assessed throughout the course? ❑ Will one grade be given to the entire portfolio? ❑ Will each piece of work in the portfolio be graded separately? ❑ Will a self-assessment be given by the student? ❑ Will peer comments and/or teacher comments be included? ❑ Will the entries be periodic or all at one time?
How will the portfolio be prepared?	❑ With a creative cover that reflects the personality or interests of the student? ❑ With a table of contents that includes the items and page numbers of the pieces of work? ❑ With a numbering or coding system for the contents of the portfolio referenced to the table of contents? ❑ With a section for written comments?

Program Topics and Student Competencies

4

Organizing Program Topics

Student Competencies for Core Topic Areas

After completing the recommended steps of the curriculum development process, the curriculum development advisory committee should focus on organizing program topics and selecting student competencies. Chapter 4 can provide the committee with guidance and tools to assist with these tasks at the middle/junior high and high school levels.

Organizing Program Topics

Two key terms used in this chapter are defined as follows:

Student Competencies. These are the skills, knowledge and attitudes necessary to perform a task. Student competencies have been developed (by Connecticut curriculum focus groups that met from 1992 through 1994) for all integrative components within the core topic areas of the family and consumer sciences education program for Grades 5-12. As course offerings are planned, student competencies must be identified. Competencies are written in terms of learner behavior and stated in measurable terms.

Course Goal. A course goal is a broad statement that guides instruction by answering the question: "What should all students know and be able to do after participating in this class?" As course offerings are identified, a course goal for each must be stated clearly and succinctly.

Organizing Topics— Middle/Junior High School Level

Students at the middle /junior high school level should be required to take family and consumer sciences education courses. District decision makers should determine the appropriate scope and sequence for programs, considering the grade levels of the students, number of students per class and number of available class periods.

At this level, the emphasis is *exploratory*. Programs should be designed to build on work and family concepts — keeping in mind that a student is most likely to acquire attitudes about work and the family at home.

For example, work values such as responsibility and cooperation usually are first learned within a family setting. Students also are exposed to employability skills — including problem solving, decision making, communication and work roles — within the family. Furthermore, specific occupational skills relating to food preparation, child care and clothing care also will most likely be learned in a family context. Family and consumer sciences education programs at this level should be designed to build on these work and family concepts.

Course offerings at this level may be organized around the core topic areas of the *family/consumer* focus and should provide a minimum time that is equivalent to a nine-week course, meeting five days per week for each grade level.

The work sheet outline in Figure 4-1 (page 47) can help the curriculum committee organize the family and consumer sciences education curriculum for Grades 5-8.

To use the work sheet outline:

- Select the core topic areas to be covered (see Figure 4-2, "Selected Subjects Within Core Topic Areas," on page 48).
- Determine the corresponding number of class periods to be offered.
- Provide a general goal statement.
- Determine the relevant student competencies for each grade (see "Core Topic Areas: Student Competencies" at the end of this chapter).

For more information on program structure and models, core topic areas and integrative components, see Chapter 2.

Organizing Topics — High School Connect Courses, *Family/Consumer* Focus

High school students enrolled in *connect* courses in the *family/consumer* focus will develop competencies needed to prepare them for the transition from school to career, the transition from youth to adulthood, and balancing work and family. Building on the exploratory courses offered in the earlier grades, the connect courses are designed to emphasize the connections among personal, family and job responsibilities.

Figure 4-1
Work Sheet Outline for Middle/Junior High School Family/Consumer Focus

Core Topic Area	Grade	No. of Class Periods	Goal Statement	Student Competencies
Nutrition and Food Technology				
Child Development				
Family Life				
Living Environments				
Fashion and Textile Technology				
Personal Management				

Figure 4-2
Selected Subjects Within Core Topic Areas
Family/Consumer Focus

Core Topic Area	Selected Subjects
Nutrition and Food Technology	food preparation skills, essential nutrients, dietary guidelines, life cycle changes, consumer laws and protection, label literacy, food technology, cultural differences, food as a social expression, disease prevention, equipment technology, diets for special needs, safety and cleanliness, technology interaction, career awareness
Child Development	child caregiving, basic physical and emotional needs, physical growth patterns, language and communication, play and learning, intellectual development, human reproduction, handling emergencies, space and equipment, child abuse, parenthood, professional services for children, career exploration
Family Life	family relationships, life cycle changes, parenting skills, coping with family crisis, family intervention services, multicultural awareness, gender equity, value of work at home, career exploration, technological literacy
Living Environments	home space needs, housing needs of the future, housing for aging populations, energy conservation, interior and exterior design, design influences, family function, life cycle considerations, consumer protection, career exploration, technology impact
Fashion and Textile Technology	clothing construction and repair, physical needs, creative expression, wardrobe planning, fashion design, textile technology, comparison shopping, clothing and lifestyle, economic aspects, equipment technology, cultural features, dressing for success, career awareness
Personal Management	lifestyle decisions, value systems, building personal relationships, use of leisure time, income earning, productive employment, financial management, community participation, good grooming, cultural diversity, technology impact, career awareness

The high school curriculum is presented in a semester model, allowing systematic and ongoing study of the core course areas. Courses may be designed around central themes, *across multiple core topic areas* or around central themes *within a core topic area.* The following are examples of courses planned across multiple core topic areas:

- family and technology
- family, food and society
- parents and children
- family and community
- family relationships
- consumer economics
- family and work
- independent living
- resource management
- life management

Many courses can be developed around a core topic area. Examples include:

- food science
- fashion design and costuming
- nutrition and food technology
- child development
- family life
- living environments
- personal management
- textile technology

The work sheet outline in Figure 4-3 (pages 50-51) can help the curriculum committee organize topics in the *family/consumer* focus at the high school level.

To use this work sheet outline:

- Identify the core topics to be covered (see Figure 4-2, "Selected Subjects Within Core Topic Areas," on page 48).
- Determine the course(s) in each core topic area to be offered and at what grade level(s).

Then, for each course:

- Select a course title.
- Develop a goal statement.
- Determine the relevant student competencies for each grade (see "Core Topic Areas: Student Competencies" at the end of this chapter).

For more information on program structure and models, core topic areas and integrative components, see Chapter 2.

Organizing Topics — High School Preparation Courses, *Work/Career* Focus

The high school family and consumer sciences program should offer school-based and work-based education courses encompassing the *work/career* focus courses in Grades 11 and 12. This focus emphasizes the integration of related academic instruction, work ethics, employability, critical thinking skills and essential occupational competencies to ensure that learners are well prepared to meet the demands of the workplace and further education.

Local districts may offer cooperative work education courses, independent study courses or in-school simulation or laboratory courses. Work experience courses should be scheduled for double periods during laboratory operation to enable students to experience multiple phases of the occupations.

The work sheet outline in Figure 4-4 (pages 52-53) can help the curriculum committee organize topics in the *work/career* focus.

To use this work sheet outline:

- Identify the core topics to be covered (see Figure 4-2, "Selected Subjects Within Core Topic Areas," on page 48).
- Determine the course(s) in each core topic area to be offered and at what grade level(s).

Then, for each course:

- Select a course title.
- Develop a goal statement.
- Determine the relevant student competencies for each grade (see "Core Topic Areas: Student Competencies" at the end of this chapter).

For more information on program structure and models, core topic areas and integrative components, see Chapter 2.

Figure 4-3
Work Sheet Outline for the High School Family/Consumer Focus

Core Topic Area	Course Title(s)	Grade(s)
Nutrition and Food Technology		
Child Development		
Family Life		
Living Environments		
Fashion and Textile Technology		
Personal Management		

Figure 4-3 (continued)
Work Sheet Outline for the High School Family/Consumer Focus

Goal Statement	Student Competencies

Figure 4-4
Work Sheet Outline for the High School Work/Career Focus

Core Topic Area	Course Title(s)	Grade(s)
Foodservice Management		
Child-Care Services		
Family and Human Services		
Fashion and Textile Production and Services		

Figure 4-4 (continued)
Work Sheet Outline for the High School Work/Career Focus

Goal Statement	Student Competency

Core Topic Areas:
Student Competencies

Core topic area student competencies within each integrative component are identified in detail on the following pages. Each core topic area is presented by levels: Grades 5-8 and Grades 9-12 for the *family/consumer* focus and Grades 11-12 for the *work/career* focus.

A student compentency generally encompasses more than one integrative component, with one component surfacing as the major substance of each competency. Therefore, in the chart that appears on the right-hand side of the following pages, each student competency is highlighted under one integrative component of major substance, indicated by a solid star (★). The additional elements of each student competency are indicated by an open star (☆) under each integrative component encompassed.

Family/Consumer Focus
Core Topic: Nutrition and Food Technology
Grades 5-8

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Describe personal responsibility for following healthy dietary practices	★	☆	☆	☆	☆	☆	☆
Cite factors that influence individual eating patterns	★			☆	☆		
Demonstrate mealtime etiquette	★	☆	☆				
Roles and Responsibilities							
Identify the role of food within cultures, social customs and family traditions		★		☆	☆		☆
Demonstrate and/or practice food preparation techniques	☆	★	☆	☆	☆	☆	☆
Career Awareness							
Identify careers in food and nutrition occupations	☆		★		☆	☆	☆
Critical Thinking Skills							
Compare and analyze a variety of food forms	☆			★	☆	☆	
Interpret information on food labels			☆	★	☆	☆	☆
Plan nutritious meals	☆	☆		★	☆	☆	
Explain the function of nutrients in the body	☆		☆	★	☆		
Analyze personal diet using the food pyramid	☆	☆		★	☆		
Cite examples of common health problems related to diet		☆		★	☆		☆
Identify the contributions of snacks to a nutritional diet	☆	☆		★	☆	☆	
Applied Academics							
Define nutrition	☆		☆	☆	★		
Identify nutrients: their sources and function				☆	★	☆	
Discuss the use of the food pyramid	☆			☆	★	☆	
Plan a well-balanced meal using the current nutritional standards	☆		☆	☆	★		
Discuss technology in food production, processing and preservation		☆	☆	☆	★	☆	☆
Define basic food preparation terms and techniques		☆		☆	★	☆	☆
Discuss the planning, preparing and serving of food		☆	☆	☆	★	☆	☆
Consumer Education							
List the information on a food label	☆	☆		☆	☆	★	☆
Discuss decisions related to food preparation	☆	☆	☆	☆	☆	★	☆
Describe factors that influence food selections	☆		☆	☆	☆	★	☆
Demonstrate time-saving skills in food preparation	☆	☆		☆	☆	★	☆
Evaluate quality and cost factors in food preparation				☆	☆	★	
Safety and Sanitation							
Practice health and safety measures when working with food	☆	☆	☆		☆	☆	★
Identify problems resulting from unsanitary food handling	☆	☆	☆	☆	☆	☆	★
Demonstrate proper use and care of food preparation equipment and appliances	☆	☆			☆	☆	★
Identify health and safety resources	☆		☆		☆	☆	★

Family/Consumer Focus
Core Topic: Nutrition and Food Technology
Grades 9-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Examine individual diets and needs based on current nutritional standards	★	☆		☆	☆		
Discuss the social and psychological impact of food	★	☆	☆	☆	☆		
Compare individual diets to current nutritional standards	★	☆		☆	☆	☆	
Roles and Responsibilities							
List roles and responsibilities of entertaining	☆	★	☆		☆		☆
Discuss the relationship between food habits and family lifestyle		★		☆	☆	☆	
Outline ways for family members to share the tasks of feeding the family	☆	★	☆	☆	☆	☆	
Demonstrate appropriate interpersonal skills during food labs	☆	★		☆			☆
Describe the interrelationships of food and agriculture in economic systems		★	☆	☆	☆	☆	
Evaluate the role of food in a family value system	☆	★		☆	☆	☆	
Career Awareness							
Identify career opportunities in food fields	☆	☆	★		☆		☆
Analyze educational requirements for careers in foods and nutrition	☆		★	☆	☆	☆	
Generate entrepreneurial possibilities in food-related businesses	☆		★		☆	☆	☆
Critical Thinking Skills							
Explain possible reasons for eating disorders	☆			★	☆		☆
Discuss task analysis and sequential planning for preparing and serving a meal	☆	☆	☆	★	☆	☆	☆
Analyze meals for quality, cost and nutrition		☆	☆	★	☆	☆	
Compare nutritional needs for various stages of the life cycle		☆		★	☆	☆	☆
Evaluate diet modifications helpful to control diseases and health conditions	☆	☆	☆	★	☆		☆
Analyze societal issues connected with poor nutrition		☆	☆	★	☆	☆	☆
Evaluate family meal patterns	☆	☆		★	☆	☆	
Modify recipes to reflect a healthier product		☆	☆	★	☆	☆	
Applied Academics							
Describe foods needed for growth, repair and maintenance of the body	☆	☆		☆	★		
Explain the process by which foods are converted into energy in the body				☆	★		
Examine information and guidelines contained in current nutritional standards	☆	☆	☆		★	☆	
Discuss appropriate weight control options				☆	★	☆	
Identify dietary customs in different cultures		☆	☆	☆	★		☆
Consumer Education							
Discuss quality and cost of various forms of food			☆	☆	☆	★	☆
Use organizational skills and time management in food preparation		☆		☆	☆	★	☆
Practice conservation of resources and energy in preparing and serving a meal		☆			☆	★	☆
Determine resources for food and nutrition information	☆		☆		☆	★	
Assess trends in food marketing and entrepreneurship	☆		☆	☆	☆	★	
Analyze advertising techniques that influence food purchases				☆	☆	★	
Plan a meal within a given budget	☆	☆	☆	☆	☆	★	☆
Examine protection laws governing food inspection, packaging and sales				☆	☆	★	☆
Safety and Sanitation							
Practice personal hygiene when working with food	☆	☆	☆		☆		★
Choose ways to conserve quality and nutrients when storing and preparing food	☆		☆	☆	☆	☆	★
Explain the public health services provided for residents of a community				☆	☆	☆	★
Demonstrate safe and sanitary methods of handling and storing foods	☆	☆			☆	☆	★
Practice appropriate methods in use and care of food-related equipment	☆	☆	☆	☆		☆	★

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Family/Consumer Focus
Core Topic: Child Development
Grades 5-8

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Identify the basic physical and emotional needs of infants and young children	★	☆			☆		☆
Recognize the special needs of people with disabilities	★	☆	☆	☆			☆
Identify personal value structure	★	☆	☆	☆	☆	☆	☆
Practice interpersonal communication	★	☆	☆	☆	☆	☆	☆
Identify positive personal qualities	★	☆	☆	☆	☆	☆	☆
Roles and Responsibilities							
Identify the basic requirements for responsible parenting and child care	☆	★		☆	☆	☆	☆
Recognize the individual's role in the family, school, work and community	☆	★	☆				☆
Explain consequences of individual choices	☆	★		☆	☆		☆
Demonstrate gender equity in child care	☆	★	☆				☆
Career Awareness							
Plan ways to interact with children		☆	★	☆	☆	☆	☆
Investigate career opportunities in the child-care field	☆	☆	★		☆	☆	
Identify skills and attitudes needed for effective child care	☆	☆	★	☆			☆
Explain responsibilities related to baby-sitting	☆	☆	★	☆	☆		☆
Critical Thinking Skills							
Practice problem-solving techniques to determine appropriate discipline procedures	☆	☆		★			☆
Select age-appropriate toys and activities for children		☆		★	☆	☆	☆
Research the developmental stages of children	☆		☆	★	☆		
Identify the effects of prenatal care on the unborn child	☆	☆	☆	★	☆		☆
Applied Academics							
List the guidelines for adequate childhood nutrition		☆	☆		★	☆	☆
Examine the cultural differences in child-rearing practices	☆	☆	☆	☆	★		☆
Identify costs relating to child care				☆	★	☆	
List technological advancements in child care			☆		★	☆	☆
Consumer Education							
Budget baby-sitting time and income	☆	☆	☆	☆	☆	★	☆
Develop marketable skills required for baby-sitting	☆	☆	☆	☆		★	☆
Evaluate ads for children's toys and food	☆	☆		☆	☆	★	☆
Safety and Sanitation							
Evaluate toys for safety		☆	☆	☆	☆	☆	★
Demonstrate basic first aid procedures for common injuries to children		☆		☆			★
Outline emergency procedures to take in the event a child is injured or sick	☆	☆	☆	☆	☆	☆	★
Identify types and consequences of child abuse		☆		☆			★
Explain procedures to follow when child abuse is suspected or experienced	☆	☆		☆			★
Analyze the home for safety hazards	☆			☆	☆	☆	★

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Family/Consumer Focus
Core Topic: Child Development
Grades 9-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Analyze various ways parents and children communicate	★	☆		☆	☆		
Evaluate the unique aspects of individuals	★	☆		☆			
Compare elements of development in various life-cycle stages	★	☆	☆	☆	☆		☆
Assess personal value structure	★	☆		☆			
Evaluate ways family members can enrich a child's life	★	☆	☆			☆	
Roles and Responsibilities							
Outline the importance of being a role model to young children	☆	★	☆	☆	☆		☆
Examine various family structures	☆	★		☆	☆		
Analyze the role of family in the development of citizenship	☆	★		☆	☆		
Identify societal support systems		★	☆				☆
Assess the adjustments faced by teenage parents	☆	★	☆	☆		☆	☆
Evaluate environmental effects on growth and development	☆	★		☆	☆	☆	☆
Compare child-care options		★	☆			☆	☆
Career Awareness							
Analyze personal qualities necessary for employment in child-related occupations	☆	☆	★	☆		☆	☆
Compare child-care occupations within the community		☆	★	☆			
Identify educational training requirements for child caregivers	☆	☆	★		☆	☆	
Critical Thinking Skills							
Analyze various discipline techniques	☆	☆		★	☆		
Evaluate the effect of caregiver behavior	☆	☆	☆	★			☆
Analyze the importance of consistency and routine in child care	☆			★			☆
Evaluate the role of play in children's learning	☆	☆	☆	★	☆	☆	
Applied Academics							
Research developmental theories			☆	☆	★		
Analyze children's literature			☆	☆	★		
Compare child-rearing customs of different cultures	☆	☆		☆	★		
Observe developmental patterns of children			☆	☆	★		☆
Evaluate food choices for children					★	☆	
Demonstrate objectivity when observing and recording children's behavior	☆	☆	☆	☆	★		☆
Discuss factors that affect fetal development	☆		☆		★	☆	☆
Describe the process of labor and delivery	☆	☆			★		☆
Diagram a floor plan for a preschool classroom			☆	☆	★	☆	☆
Consumer Education							
Identify mass media influences on parents and children	☆		☆	☆	☆	★	
Evaluate the basic food, clothing, shelter and resources needed by children			☆	☆	☆	★	☆
Identify entrepreneurial possibilities in the child-care field		☆	☆			★	
Safety and Sanitation							
Explain ways a family can prepare for and support a child needing special care		☆		☆			★
Describe the effects of nutrition on children's development				☆	☆	☆	★
Identify ways to prevent sexually transmitted diseases and AIDS	☆	☆		☆	☆		★
Assess causes and effects of child abuse	☆		☆	☆			★
Recognize steps in disease prevention		☆	☆	☆	☆	☆	★

Family/Consumer Focus
Core Topic: Family Life
Grades 5-8

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Identify personal values	★	☆	☆		☆	☆	
Demonstrate effective communication techniques	★			☆		☆	
Recognize personal strengths and weaknesses	★	☆	☆	☆			
Outline influences on the development of self-image	★			☆	☆	☆	
Analyze use of leisure time	★		☆			☆	
Identify the qualities of a friend	★	☆		☆	☆		
Identify responsibilities in dating relationships	★	☆			☆		☆
Roles and Responsibilities							
Outline the characteristics of a contributing family and community member	☆	★			☆	☆	
Identify ways teens can contribute to the care of children and the elderly	☆	★	☆	☆	☆		☆
Explain the importance of family members participating in activities together	☆	★				☆	
Identify ways to develop positive parent-teen relationships	☆	★		☆	☆		
Demonstrate the various social roles played by middle school students	☆	★					
Identify personal problems facing young people	☆	★		☆	☆	☆	☆
Career Awareness							
Explore career options	☆	☆	★	☆	☆	☆	☆
Describe the positive attributes of an employee	☆	☆	★				☆
Identify personal interests relating to career choices	☆		★	☆	☆		
Critical Thinking Skills							
Identify techniques for coping with conflict and stress in families	☆	☆		★	☆		☆
List community resources available to help with personal and family problems	☆	☆		★		☆	
Describe the impact of changes within the family on individual members	☆	☆		★	☆	☆	☆
Identify differences in family units	☆	☆		★	☆		☆
Explain the difference between long- and short-term goals	☆	☆	☆	★		☆	
Identify consequences of decisions	☆	☆	☆	★	☆	☆	☆
Applied Academics							
Research personal family history	☆	☆	☆		★		
Identify cultural differences within the community		☆		☆	★		
Develop written and oral communication skills within the family	☆	☆			★		
Demonstrate mathematical principles in determining the cost of goods and services			☆		★	☆	☆
Consumer Education							
Develop a plan for baby-sitting services rendered and fees charged	☆		☆	☆	☆	★	
Evaluate advertisements for goods and services	☆			☆	☆	★	☆
List strategies to market employment skills	☆	☆	☆	☆		★	
Safety and Sanitation							
Collect information on resources available to abused or ill family members	☆	☆	☆	☆		☆	★
List characteristics of substance abusers		☆					★
Identify the potential safety and environmental hazards in the home	☆	☆		☆	☆	☆	★

Family/Consumer Focus
Core Topic: Family Life
Grades 9-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Analyze factors of effective communication	★		☆	☆	☆	☆	
Compare social and emotional factors of maturity	★	☆	☆	☆			
Evaluate sources of stress and conflict in relationships	★	☆		☆			
Outline characteristics of a mentally and emotionally well-adjusted person	★		☆	☆	☆		☆
Debate factors in mate selection	★	☆		☆	☆		☆
Compare common defense mechanisms	★	☆		☆		☆	☆
Roles and Responsibilities							
Analyze common causes of family conflict, abuse and violence	☆	★	☆	☆			☆
Determine features of successful relationships	☆	★		☆			
Evaluate the roles of family members	☆	★		☆	☆	☆	
Identify characteristics of responsible adult relationships	☆	★	☆		☆		
Compare the changing roles and responsibilities of family members	☆	★		☆		☆	☆
Evaluate personal involvement within the community	☆	★	☆		☆		☆
Career Awareness							
Examine individual and family roles in establishing career goals	☆	☆	★	☆	☆	☆	
Evaluate the relationship between personal, home and career choices	☆	☆	★	☆		☆	
Identify career options related to family life	☆	☆	★	☆	☆	☆	☆
Evaluate child-care options available to working families	☆	☆	★	☆		☆	☆
Critical Thinking Skills							
Analyze problems faced by single and teenage parents	☆	☆	☆	★		☆	☆
Evaluate sources of help within the community		☆	☆	★	☆	☆	☆
Examine approaches in evaluating family situations	☆	☆		★			
Compare the goals of individuals and families	☆	☆	☆	★	☆		
Compare the use of resources related to the family and its lifestyle stages	☆			★		☆	☆
Analyze the stages in the acceptance of death	☆	☆		★			☆
Applied Academics							
Evaluate physical, social, emotional and mental changes in the aging process	☆	☆		☆	★		☆
Investigate technological and scientific advances related to family life	☆	☆	☆	☆	★	☆	
Assess the impact of past, present and future changes within the family unit	☆	☆	☆	☆	★	☆	☆
Demonstrate math skills necessary for family financial management	☆	☆	☆	☆	★	☆	
Evaluate current laws relating to family life	☆	☆	☆	☆	★	☆	☆
Consumer Education							
Evaluate the financial contributions of an individual to the family unit	☆	☆	☆	☆	☆	★	
Develop a family financial profile	☆	☆	☆	☆	☆	★	
Design a personal leisure time budget as it relates to the family	☆	☆		☆	☆	★	
Evaluate the advertising techniques that influence consumer purchases	☆			☆	☆	★	☆
Safety and Sanitation							
Evaluate the health-care options for elderly or sick family members		☆	☆	☆		☆	★
Analyze the effects of mental and physical health problems on family members	☆	☆		☆		☆	★
Research available options for abused or ill family members		☆		☆	☆		★
Evaluate mechanisms for coping with substance abusers within the family	☆	☆		☆			★
Identify warning signals of a potential suicide	☆	☆		☆			★
Evaluate the potential safety and environmental hazards in the home	☆				☆	☆	★

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Family/Consumer Focus
Core Topic: Living Environments
Grades 5-8

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Identify the functions of personal care within individual living areas	★	☆		☆	☆	☆	☆
List ideas for accessories to personalize individual living space	★	☆	☆	☆	☆	☆	
Discuss ways to show respect for the property and privacy of others	★	☆		☆			☆
Roles and Responsibilities							
Develop a schedule for the care of individual space and belongings	☆	★	☆	☆	☆	☆	☆
Identify ways to cooperatively care for and use family space	☆	★		☆			☆
Determine family interests and hobbies	☆	★	☆		☆	☆	
Career Awareness							
Explore leisure time activities	☆	☆	★			☆	
Evaluate space and resource needs in the workplace	☆		★	☆		☆	☆
Name types of employment opportunities in housing and home care		☆	★		☆	☆	
Critical Thinking Skills							
Explain the individual need for private space and property	☆	☆		★			☆
Evaluate personal schedule for effectiveness	☆	☆		★		☆	☆
Applied Academics							
Apply the principles of color and design to personal living space	☆		☆	☆	★	☆	☆
Illustrate arrangements of furniture and equipment in living space			☆	☆	★	☆	
Consumer Education							
Identify the ways the media influence personal choices of home furnishings			☆	☆	☆	★	☆
List available activities that promote family togetherness	☆	☆	☆	☆		★	☆
Identify principles of lighting design				☆	☆	★	☆
Safety and Sanitation							
Develop a family escape plan for an emergency		☆		☆		☆	★
Locate potential safety hazards within your home		☆		☆			★
Identify housing needs for the elderly and individuals with disabilities	☆	☆	☆	☆	☆		★

Family/Consumer Focus
Core Topic: Living Environments
Grades 9-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Classify needs and wants for personal living space	★	☆		☆		☆	
Construct an arrangement of furniture and equipment for personal living space	★		☆	☆	☆		☆
Evaluate ways to meet physical needs in personal living space	★			☆			☆
Judge housing needs for families	★	☆		☆		☆	☆
Roles and Responsibilities							
Research rights and responsibilities of landlords and tenants	☆	★	☆		☆	☆	☆
Analyze various uses of shared space within the global society	☆	★	☆	☆		☆	☆
Develop a plan for personal living space	☆	★		☆		☆	☆
Career Awareness							
Investigate employment opportunities and careers in housing and home care		☆	★	☆			
Outline abilities and aptitudes needed to work in housing and environmental fields	☆	☆	★	☆	☆		
Critical Thinking Skills							
Compare warranties accompanying household furnishings and equipment		☆		★	☆	☆	☆
Evaluate influences on decorating personal living space	☆	☆	☆	★		☆	☆
Evaluate construction of household furnishings				★	☆	☆	☆
Analyze the living space to determine whether it can accommodate changes in the family life cycle	☆	☆		★		☆	☆
Research the interrelationship of housing and environment		☆	☆	★	☆		
Applied Academics							
Apply principles of color and design to create personal space				☆	★		
Evaluate ways to organize storage in personal living space	☆	☆		☆	★		
Identify use of technology related to living space	☆		☆		★	☆	
Consumer Education							
Survey media information on furniture and equipment				☆	☆	★	☆
Investigate housing options	☆		☆	☆		★	☆
Analyze organizational techniques in home management	☆	☆		☆	☆	★	☆
Safety and Sanitation							
Assess safety hazards in the home		☆		☆	☆	☆	★
Evaluate family emergency plans	☆	☆		☆			★
Recommend alterations necessary for handicap accessibility		☆	☆	☆	☆	☆	★
Design living spaces and equipment for people with special needs		☆	☆	☆	☆	☆	★
Appraise current technology for home safety	☆	☆	☆	☆	☆	☆	★
Recommend ways to minimize safety hazards in the home		☆		☆	☆	☆	★

Family/Consumer Focus
Core Topic: Fabric and Textile Technology
Grades 5-8

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
List examples of influences on personal clothing and textile selections	★	☆	☆	☆	☆	☆	☆
Explain the connection between "looking good" and "feeling good"	★			☆			
Examine styles suitable for personal characteristics and preferences	★		☆	☆		☆	
Roles and Responsibilities							
Differentiate between needs and wants in clothing and textile products	☆	★	☆	☆	☆	☆	☆
Identify appropriate clothing for various occasions	☆	★	☆			☆	☆
Describe the role clothing plays in society	☆	★	☆	☆		☆	☆
Career Awareness							
Identify occupations in the clothing and textile field	☆		★		☆		
Critical Thinking Skills							
Discuss the effects colors have on self-image and appearance	☆	☆	☆	★	☆	☆	
Use decision-making skills in choosing clothing and textile products	☆	☆		★	☆	☆	
Analyze quality construction in clothing and textile products	☆			★	☆	☆	
Applied Academics							
Define "style," "fad" and "fashion"	☆		☆	☆	★	☆	
Use current technology to create textile products that meet individual needs	☆		☆	☆	★	☆	☆
Consumer Education							
Find resources for obtaining clothing and textile products				☆	☆	★	
Interpret information on textile product labels	☆		☆	☆	☆	★	
Analyze clothing and textile advertisements		☆	☆	☆	☆	★	
Safety and Sanitation							
Determine procedures used in care of clothing	☆	☆		☆	☆	☆	★
Demonstrate appropriate use and care of equipment used in fabric construction	☆	☆	☆	☆	☆	☆	★

Family/Consumer Focus
Core Topic: Fabric and Textile Technology
Grades 9-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Investigate ways to enhance personal appearance through clothing	★	☆	☆	☆		☆	
Identify elements and principles of design	★		☆		☆	☆	
Discuss wardrobe selection and care	★	☆	☆	☆	☆	☆	☆
Analyze personal wardrobe for appropriateness and suitability	★	☆	☆				
Roles and Responsibilities							
Discuss global issues concerning clothing and textile products		★		☆	☆		☆
Investigate the economic role of the textile and garment industry in the world		★	☆	☆	☆	☆	
Identify ways clothing expresses personality and lifestyle in various cultures	☆	★	☆	☆	☆	☆	☆
Investigate clothing needs for life cycle stages	☆	★		☆		☆	
Career Awareness							
Research occupational possibilities in textile-related fields	☆		★	☆	☆		
Identify entrepreneurial opportunities in textile technology	☆		★		☆		
Evaluate special features of clothing required for various occupations	☆		★	☆			☆
Critical Thinking Skills							
Analyze fibers, fabrics and finishes in relation to their intended use			☆	★	☆	☆	☆
Outline the decision-making process used in selecting textile products	☆			★		☆	☆
Analyze features of textile products that contribute to ease of care and use			☆	★		☆	☆
Identify criteria for adapting clothing for individuals with disabilities	☆	☆		★		☆	☆
Describe the use of accessories for enhancing and expanding wardrobe items	☆		☆	★		☆	
Project future trends in clothing and textile styles and functions		☆	☆	★	☆	☆	
Applied Academics							
Discuss creative applications in clothing and textile items	☆		☆	☆	★	☆	☆
Outline the history of fashion			☆	☆	★		
Discuss the role of technology in textiles	☆	☆		☆	★	☆	☆
Create original textile products	☆		☆	☆	★	☆	☆
Alter a textile product for fit	☆	☆	☆	☆	★	☆	
Consumer Education							
Budget for clothing needs	☆	☆		☆	☆	★	
Compare cost of handmade and commercially made textile products			☆	☆	☆	★	
Identify quality in construction of textile products	☆	☆	☆	☆	☆	★	☆
Compare various types of stores selling clothing and textile products			☆	☆		★	
Investigate marketing techniques	☆		☆	☆	☆	★	
Outline rights and responsibilities of the consumer	☆	☆		☆	☆	★	
Discuss various advertising claims and their effects on consumers	☆			☆	☆	★	
Explain the advantages of comparison shopping	☆	☆		☆	☆	★	
Analyze the information required on textile labels	☆				☆	★	☆
Safety and Sanitation							
Identify the safety and sanitation features used in clothing	☆	☆		☆	☆	☆	★
Determine appropriate techniques for care of textile products	☆			☆		☆	★
Practice appropriate use and care of textile-related equipment and tools	☆	☆	☆		☆	☆	★
Analyze hazardous substances used in the manufacture of textiles		☆		☆	☆	☆	★

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Family/Consumer Focus
Core Topic: Personal Management
Grades 5-8

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Examine personal space requirements	★				☆	☆	☆
Assess personal needs and wants	★	☆	☆	☆		☆	
Outline a personal budget	★		☆		☆	☆	
Develop personal goals	★	☆	☆	☆	☆	☆	
Identify the relationship between clothing and self-concept	★	☆	☆			☆	
Recognize the importance of verbal and nonverbal communication	★		☆		☆	☆	
Roles and Responsibilities							
Compare cultural differences within the community	☆	★		☆	☆		
Identify roles and responsibilities of a good citizen	☆	★	☆		☆	☆	
Recognize gender equity in life management responsibilities	☆	★	☆	☆		☆	
Identify differences in lifestyles	☆	★	☆	☆	☆		
Career Awareness							
Investigate future career options	☆	☆	★	☆	☆	☆	
Discuss the relationship of attitude and employability	☆	☆	★	☆	☆	☆	
Explore personal interests in relation to career options	☆	☆	★	☆		☆	
Identify the responsibilities of being an employee	☆	☆	★		☆	☆	☆
List work opportunities for middle school-age students	☆	☆	★			☆	
Critical Thinking Skills							
Apply problem-solving skills	☆	☆		★	☆		
Outline resources available for acquiring money/clothing/meals	☆	☆	☆	★	☆	☆	
Outline steps in decision making	☆			★	☆		
Applied Academics							
Identify various methods of acquiring personal management information	☆	☆	☆	☆	★	☆	☆
Develop mathematical skills in budget planning	☆			☆	★	☆	
Consumer Education							
Identify advertising techniques and strategies	☆			☆	☆	★	
List entrepreneurial skills	☆	☆	☆			★	
Recognize the extent to which gender equity exists in financial transactions	☆	☆	☆	☆	☆	★	
Safety and Sanitation							
Outline the steps to take in common health and accident emergencies		☆		☆			★
Discuss personal routines as they relate to health and fitness	☆		☆		☆		★
Identify relationships between food habits and personal appearance	☆			☆	☆		★

Family/Consumer Focus
Core Topic: Personal Management
Grades 9-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Predict consequences of decisions	★	☆	☆	☆		☆	
Identify legal rights and responsibilities associated with independence from family	★	☆	☆	☆	☆	☆	
Evaluate personal value system	★	☆	☆	☆			☆
Debate differences between rights and responsibilities	★	☆	☆	☆	☆	☆	
Role-play interpersonal skills	★	☆	☆				
Demonstrate grooming and dress for social and professional situations	★	☆	☆	☆	☆	☆	☆
Develop life management skills	★	☆	☆	☆	☆	☆	☆
Roles and Responsibilities							
Choose methods to ensure personal health	☆	★		☆			☆
Analyze individual rights and responsibilities in the community	☆	★		☆	☆	☆	
Debate the role of gender in society	☆	★	☆	☆	☆	☆	☆
Investigate lifestyle choices	☆	★	☆	☆	☆	☆	☆
Identify roles and responsibilities associated with sexual harassment	☆	★	☆	☆			☆
Career Awareness							
Describe elements of dependability and commitment in employer-employee relationships	☆	☆	★	☆	☆		☆
Analyze the interests, aptitudes and education necessary for career entry	☆	☆	★	☆	☆		
Develop a sense of pride and personal worth as they relate to work productivity	☆	☆	★				
Identify skills leading to positive interpersonal relationships	☆	☆	★	☆	☆		
Critical Thinking Skills							
Analyze personal problems common to young adults	☆	☆		★			☆
Identify factors that affect personal choices	☆	☆	☆	★	☆	☆	☆
Research available community resources				★	☆		☆
Evaluate personal decisions	☆	☆	☆	★			☆
Applied Academics							
Demonstrate ability to perform academic skills related to life management	☆		☆	☆	★	☆	
Apply technological and scientific advances		☆	☆	☆	★	☆	
Analyze cultural differences	☆	☆		☆	★		
Consumer Education							
Evaluate housing options	☆			☆		★	☆
Develop a personal financial profile	☆	☆	☆	☆	☆	★	
Investigate financial services available to the consumer	☆	☆		☆	☆	★	
Design a system for the organization of important papers	☆			☆	☆	★	
Evaluate the advertising techniques that influence consumer purchases	☆		☆	☆	☆	★	☆
Safety and Sanitation							
Evaluate personal responsibilities in preventing the spread of diseases	☆	☆		☆	☆		★
Formulate a personal hygiene plan	☆	☆					★
Analyze available health-care options			☆	☆	☆		★
Evaluate individual responsibilities relating to environmental issues	☆	☆		☆	☆	☆	★
Investigate and practice protection and/or survival skills	☆			☆	☆	☆	★

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Work/Career Focus
Core Topic: Foodservice Management
Grades 11-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Identify qualities necessary to be employed in the foodservice industry	★	☆	☆		☆	☆	
Adhere to institutional attendance and employment policies	★	☆	☆		☆		
Demonstrate good work habits by performing tasks responsibly and efficiently	★	☆	☆	☆			☆
Demonstrate appropriate interpersonal skills during food labs	★	☆		☆	☆	☆	
Recognize the importance of individual responsibilities related to group or teamwork	★	☆		☆	☆		☆
Roles and Responsibilities							
Demonstrate positive communication skills when working with staff and customers	☆	★		☆	☆	☆	
Understand the importance of employee/employer communication	☆	★	☆	☆	☆	☆	
Demonstrate cooperation and the delegation of duties in a work environment	☆	★	☆	☆	☆	☆	
Apply management skills to the operation of a foodservice establishment	☆	★	☆	☆	☆		☆
Career Awareness							
Develop an awareness of careers in the foodservice industry	☆		★	☆	☆		
Consider foodservice occupations that will be satisfying and suitable	☆		★	☆		☆	
Identify steps in securing employment and/or entering postsecondary education		☆	★		☆	☆	
Design and operate a foodservice business	☆	☆	★				☆
Critical Thinking Skills							
Identify trends and legislation which affect the foodservice industry		☆	☆	★	☆	☆	☆
Analyze the factors that will influence planning and designing menus	☆		☆	★	☆	☆	
Be aware of stressors in daily foodservice operations	☆	☆		★			
Compare and contrast food and labor costs in making menu decisions			☆	★	☆	☆	
Evaluate facility design in relation to work flow		☆		★	☆	☆	☆
Use nutritional information in preparing and serving food		☆		★	☆	☆	
Applied Academics							
Understand menu and culinary terminology	☆		☆	☆	★		
Use and evaluate periodicals related to the foodservice industry		☆	☆	☆	★	☆	
Demonstrate the ability to take a customer's order and place it in the kitchen	☆	☆		☆	★		
Apply the concepts of mathematics related to weights and measures	☆			☆	★	☆	
Show how the principles of science relate to food production and the finished product		☆		☆	★		☆
Identify the cultural, economic and social conditions related to foodservice	☆		☆	☆	★	☆	
Maintain purchasing and other operational records	☆	☆		☆	★		
Investigate technological and scientific advances related to the foodservice industry		☆		☆	★	☆	☆
Consumer Education							
Demonstrate the relationship of individual tasks to overall work flow and operation		☆	☆	☆		★	
Demonstrate the principles and preparation involved in quantity cooking	☆	☆	☆	☆	☆	★	☆
Develop advertising techniques				☆	☆	★	
Safety and Sanitation							
Determine and implement foodservice safety and sanitation practices	☆	☆		☆	☆		★
Describe protection laws governing food inspection			☆	☆	☆	☆	★
Demonstrate appropriate use and care of food preparation tools and equipment	☆	☆	☆	☆	☆		★
Identify illnesses resulting from unsanitary food practices			☆	☆	☆		★
Demonstrate and maintain standards of personal grooming and hygiene	☆	☆	☆				★

Work/Career Focus
Core Topic: Child-Care Services
Grades 11-12

	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Practice effective communication skills with peers, children, parents and supervisors	★	☆	☆	☆	☆		
Develop teamwork and citizenship skills	★	☆	☆	☆			
Work cooperatively with staff, parents and volunteers in classroom/laboratory setting	★	☆	☆				☆
Demonstrate leadership skills	★	☆	☆	☆	☆		
Manage personal, home and work roles	★	☆	☆	☆		☆	☆
Roles and Responsibilities							
Demonstrate skills needed to obtain employment	☆	★	☆	☆	☆	☆	
Demonstrate personal qualities needed to support the child's feelings of self-worth	☆	★	☆	☆			
Follow operational procedures in a work setting	☆	★	☆	☆	☆		☆
Demonstrate principles of positive guidance and discipline when working with children	☆	★	☆	☆	☆		☆
Supervise children during the laboratory session	☆	★	☆	☆			☆
Career Awareness							
Analyze career opportunities in relation to personal appraisal	☆	☆	★	☆	☆	☆	
Research job opportunities in child-care and related fields			★	☆	☆	☆	
Practice job-seeking skills	☆	☆	★	☆	☆		
Critical Thinking Skills							
Apply problem-solving techniques to personal, home and work situations	☆	☆	☆	★	☆	☆	☆
Examine individual children's development based on a series of guided observations	☆			★	☆		
Assess materials and activities related to the development of preschool children		☆	☆	★	☆	☆	☆
Evaluate child-care programs and facilities			☆	★	☆	☆	☆
Develop solutions for issues and problems encountered in the work setting	☆	☆	☆	★	☆	☆	☆
Design developmentally appropriate activities for children	☆	☆	☆	★	☆		☆
Applied Academics							
Demonstrate skills needed to maintain employment	☆	☆		☆	★	☆	☆
Demonstrate the basic academic skills as required in the workplace	☆	☆	☆		★		
Develop a budget related to the child-care laboratory			☆	☆	★	☆	
Plan a curriculum using knowledge of the current theories of learning		☆	☆	☆	★		
Provide experiences for children that facilitate intellectual, physical, social, emotional and language development	☆	☆	☆		★		☆
Use appropriate record-keeping systems related to the child-care laboratory setting		☆	☆		★		☆
Consumer Education							
Use appropriate technological equipment in the classroom		☆	☆		☆	★	
Evaluate educational materials for use in the laboratory setting			☆	☆		★	☆
Safety and Sanitation							
Maintain a safe and healthy environment for infants and children		☆	☆			☆	★
Demonstrate knowledge of safe work habits	☆	☆	☆	☆			★
Establish, maintain and promote good nutrition and health habits	☆	☆			☆	☆	★
Identify emergency procedures		☆		☆	☆		★

Work/Career Focus
Core Topic: Fashion and Textile Production and Services
Grades 11-12

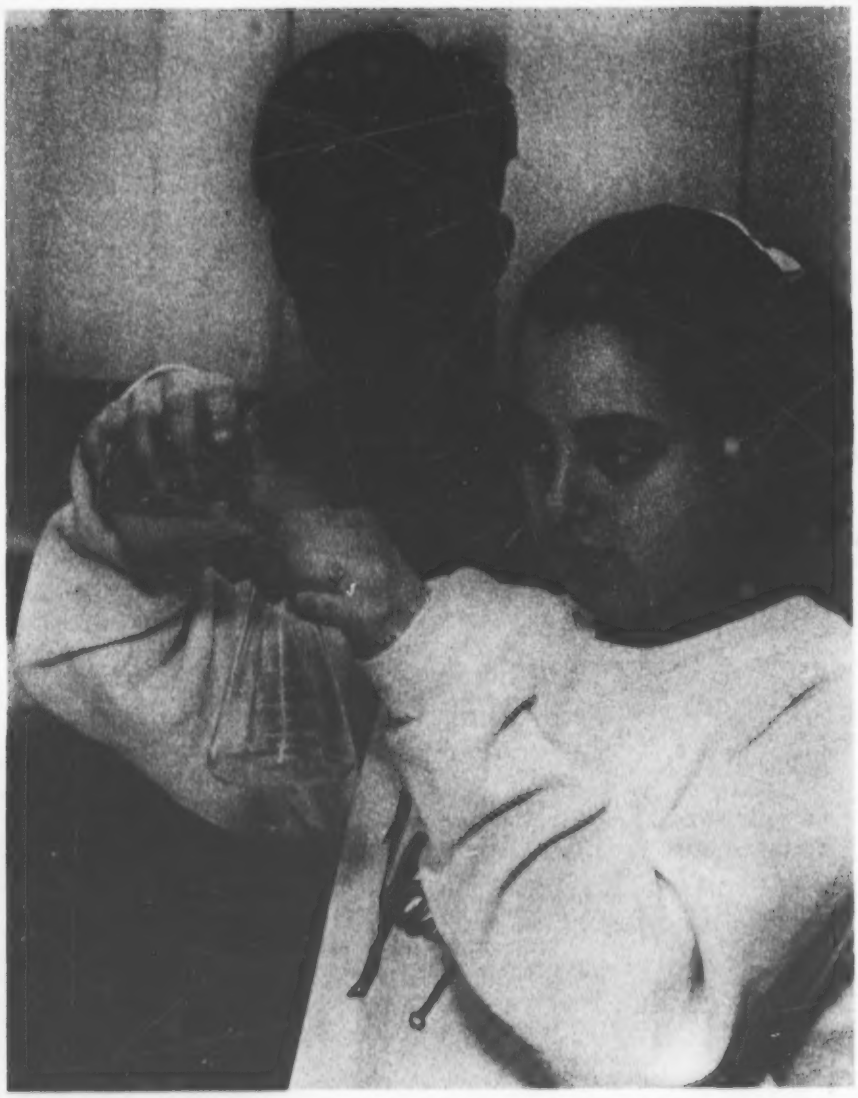
	Individual Development	Roles and Responsibilities	Career Awareness	Critical Thinking Skills	Applied Academics	Consumer Education	Safety and Sanitation
Individual Development							
Develop communication skills	★	☆		☆			
Demonstrate effective skills needed for working in diverse groups	★	☆	☆	☆			
Evaluate personal qualities related to technology in the textile industry	★	☆	☆	☆	☆		☆
Develop entrepreneurial business skills	★	☆	☆	☆	☆	☆	☆
Roles and Responsibilities							
Discuss the impact of textile production and services on the environment		★	☆	☆	☆	☆	☆
Assess the impact of a global economy on textile production and services		★	☆	☆	☆		
Identify various roles individuals assume in balancing work and family	☆	★	☆	☆	☆		
Demonstrate appropriate business behavior	☆	★	☆	☆			☆
Career Awareness							
Identify careers and career clusters related to textile production and services		☆	★	☆	☆		
Describe employee qualifications for a variety of positions in the textile field		☆	★	☆	☆	☆	☆
Describe job search procedures and resources	☆	☆	★	☆	☆		
Critical Thinking Skills							
Describe the stages of products from manufacturer to market		☆	☆	★	☆	☆	
Relate design to sociological, psychological and economic issues and trends	☆		☆	★	☆	☆	
Demonstrate how patterns are sized	☆			★	☆	☆	
Demonstrate layout for best arrangement of pattern pieces	☆		☆	★	☆	☆	
Select techniques to redesign or repair apparel	☆	☆	☆	★		☆	
Interpret product information and recommend procedures to care for merchandise	☆	☆		★	☆	☆	☆
Applied Academics							
Investigate technological and scientific advances related to the textile industry	☆		☆	☆	★		☆
Demonstrate skills and techniques for garment construction and alteration	☆	☆	☆	☆	★		
Determine costs of repairs and alterations	☆			☆	★	☆	
Identify and classify fibers	☆		☆	☆	★		
Understand factors in determining the care of fabrics	☆			☆	★	☆	☆
Trace history of fiber development	☆		☆	☆	★		
Consumer Education							
Interpret the complete process of manufacturing		☆	☆	☆	☆	★	☆
Identify the factors which establish the suggested retail price	☆	☆	☆	☆	☆	★	
Research trends in fashion and textile production and services		☆	☆	☆	☆	★	
Identify marketing and merchandising procedures to create a specific image	☆	☆	☆	☆	☆	★	
Compare similar merchandise manufactured by different firms		☆		☆	☆	★	
Describe various inventory control systems				☆	☆	★	
Design, set up and maintain effective store and window displays	☆	☆	☆	☆		★	
Demonstrate effective customer relations	☆	☆	☆	☆		★	
Safety and Sanitation							
Follow safety and security procedures required in the textile industry	☆	☆	☆		☆		★
Explain safety features of equipment and tools used to perform various jobs		☆	☆	☆			★
Demonstrate the care of industrial machinery, equipment, tools and supplies	☆	☆	☆		☆		★
Identify hazardous materials	☆	☆	☆		☆	☆	★

Integrating Academics and Technology 5

Applied Education: Integrating Academic and Vocational Education

Integrating Academics and Workplace Readiness Skills into the Curriculum

Tech Prep/Applied Academics Initiative



In the past, major educational reform movements in our country have been spurred by massive social and historical events. The first wave of school reform — in the early 1900s — was intended to help immigrants become effective citizens by teaching them to read, write and compute.

In the second wave of school reform after World War II, schools continued to teach basic skills and started to focus on preparing students for higher education — seen as the ticket to the American dream.

Today, in the third wave of reform, we are still using readiness for college as the benchmark for making most educational decisions. However, because of the dramatic changes in today's workplace, the skills, knowledge and behaviors needed for entry-level employment are different from those needed for higher education. At the same time, according to many reports, the nation's students are deficient in academic skills.

To respond to this latest challenge, family and consumer sciences education programs in Connecticut need to emphasize the integration of academics into the *family/consumer* and *work/career* focuses, offer new planning structures such as the Tech Prep and applied academics programs, and provide other experience-based learning initiatives. These topics are addressed in this chapter.

Applied Education: Integrating Academic and Vocational Education

Applied education and academic education traditionally have been seen as two separate worlds. Applied education has focused on the "real world" of work and family, while academic education has taken a more theoretical focus — scholastic knowledge we all need.

But today's concern about our current educational system and the importance of preparing students for the "real world" have called for a new look at bringing these two worlds together. New initiatives are seeking to strike a better balance between academic and applied education in order to reflect more accurately the capabilities and aspirations of individuals and the needs of society.

Integrating the curriculums of applied and academic education is one battle cry of those championing education reform. Such integration, say the proponents, would allow students to connect theories and principles to their everyday world by applying them in real situations.

Many approaches to such integration currently exist. One is to modify the academic curriculum by incorporating applied education. Another way is to incorporate more academic materials into applied education courses. These and other models are discussed in more detail at the end of this chapter.

According to Norton Grubb, a noted authority on the integration of academic and vocational education,

> Integrating academic and vocational education is not, we think, an end in itself. It is, instead, a way of overcoming some deficiencies of the American high school, including those that developed as a result of the original division between academic and vocational subjects a decade ago. It also provides a vision of what secondary education could be, and an impetus for change. For these reasons, the efforts to integrate academic and vocational education may be the best stimulus to reconstruct the American high school. (Grubb 1991, page 1)

Efforts to integrate academic and applied education require vision, commitment, revised curriculum materials, and teacher support and training. Also, enhanced guidance and counseling will be necessary to help students understand the purpose of both academic and applied education offerings so they can make informed decisions about their courses.

Integrating Academics and Workplace Readiness Skills into the Curriculum

Family and consumer sciences education programs always have offered a natural setting for students to apply academic and workplace readiness skills to work and family issues. Because of the nature of the program, family and consumer sciences educators are already oriented toward integrating academics and

workplace readiness skills into the curriculum. However, the renewed concern for academics may require different teaching strategies and a fresh look at the existing curriculum to judge if it fully supports this concept. Refer to Chapter 3 for a further discussion of factors influencing curriculum development and current perspectives on teaching and learning that affect the curriculum development process.

Research shows that students need additional educational opportunities for applying academics. Current legislation calls for integrating applied education classes with basic academics — science, mathematics, reading, writing and communications. The program in Connecticut supports this initiative by offering annual program grants. The grants are distributed in order to improve, expand and enhance local family and consumer sciences education programs through the Carl D. Perkins Vocational and Applied Technology Education Act.

Along with academic skills, today's employment picture also dictates a need for job-specific and employability skills. In Connecticut, family and consumer sciences students can learn job-specific skills throughout the *work/career* focus. Additionally, employability skills are being emphasized in the *family/consumer* and *work/career* focuses of the program through the incorporation of special integrative components, such as critical thinking skills, career awareness, applied academics, and roles and responsibilities.

Integrating academics and workplace readiness skills into the *family/consumer* and *work/career* focuses means that academic skills in science, mathematics, reading, writing and communications must continue to be emphasized in all family and consumer sciences education programs.

Furthermore, technology should be integrated into the curriculum in order to support and enhance the programs. Educators who are willing to accept and use new technology believe that it can:

- empower their students to take more responsibility for their own education;
- liberate the imagination and inspire curiosity and creativity;
- enhance the personal productivity of both teachers and students; and
- provide students with necessary technological literacy.

Advances in technology must be analyzed continually to see what they offer the educational process. At present, the tools in educational technology include:

- computers;
- CD-ROM (computer disk-read only memory) technology;
- interactive, multimedia educational software programs;
- electronic bulletin boards such as Compuserve®, Prodigy® and Internet®;
- videodiscs; and
- VCR equipment (videocassettes and recorders).

By exploring advances in technology, students learn how technology relates to individuals, families and work, and they gain the technological literacy the workplace requires. For example, interacting with a computer via CD-ROM brings to life learning about individuals, families and work. Computer on-line services such as Compuserve®, Prodigy® and Internet® can bring information from around the world directly into the classroom or work site.

Integrating Mathematics into the Curriculum

In the last few years, there has been a public call for change in mathematics instruction in U.S. schools. In making their case, proponents cite poor student performance in long-established areas, newly emphasized topics and skills not addressed in K-12 mathematics, and rapid advances in technology. The influential National Council of Teachers of Mathematics (NCTM), in its *Curriculum and Evaluation Standards For School Mathematics* (1989) and *Professional Standards for Teaching School Mathematics* (1991), bases its recommended standards — adopted by more than 40 states to date — on the following premises:

1. "Problem solving should be the central focus of the mathematics curriculum" (NCTM *Standards).* Real-world and applied education problems are ideal for this study.

2. Students must be helped to make mathematical connections — between mathematical concepts and their use in the real and work worlds, between mathematics concepts and key concepts in other disciplines, and among areas of mathematics.

At the same time that mathematics educators were developing the NCTM *Standards,* other academic and applied education teachers were addressing many of the same concerns through the Tech Prep/Applied Academics initiative. NCTM *Standards* share Tech Prep's goals of:

- integrating the curriculum;
- identifying and teaching skills students need for their futures; and
- emphasizing application of basic knowledge.

Learning activities in family and consumer sciences education offer many opportunities for students to apply basic mathematics skills. Competencies in applied mathematics that should be incorporated into the family and consumer sciences education curriculum are shown in Figure 5-1 (below). Sample mathematics skills, broken down by core topic areas, are outlined in Figure 5-2 (pages 75-76).

Figure 5-1
Competencies in Applied Mathematics

Mathematics Review	◆ Naming numbers in different ways ◆ Finding answers with a calculator
Basic Mathematics Skills	◆ Learning problem-solving techniques ◆ Estimating answers ◆ Measuring in English and metric units ◆ Using graphs, charts and tables ◆ Dealing with data
Basic Skills in Algebra	◆ Using ratios and proportions ◆ Working with scale drawings ◆ Using precision, accuracy and tolerance ◆ Using formulas to solve problems ◆ Solving problems with linear and nonlinear equations ◆ Graphing data
Quality Control	◆ Working with statistics ◆ Working with probabilities
Computer Technology	◆ Solving problems with computer spreadsheets and computer graphics ◆ Learning new skills ◆ Testing and demonstrating knowledge gained

Figure 5-2
Family and Consumer Sciences Education Curriculums
Sample Mathematics Skills

Nutrition and Food Technology

- Analyzing daily food intake and caloric requirements using computer software
- Calculating recipe adjustments
- Measuring ingredients using measuring equipment
- Understanding unit pricing
- Determining time adjustments for microwave cooking
- Calculating cost per serving and/or cost per use
- Calculating calories needed and/or used
- Making a time-work plan
- Learning to read and use a cooking thermometer
- Solving problems using metric measurement
- Computing calories needed to maintain body weight
- Analyzing techniques for saving money and time in food shopping and preparation
- Evaluating grocery store sale items
- Determining label information
- Comparing brand prices
- Determining the advantages and disadvantages of convenience foods
- Comparing freezer storage costs

Child Development

- Estimating the costs of having and raising a child
- Calculating various child-care costs
- Estimating the expenses involved in adoption or child support
- Calculating growth cycles
- Coordinating parent and child time schedules
- Preparing infant formula/foods
- Dealing with child-related medical problems (calculating dosage size, reading a thermometer)
- Teaching pre-mathematics skills to children

Family Life

- Calculating and comparing different costs of products for family use
- Analyzing advertisements and promotions used to influence purchases
- Comparing quality and cost of convenience products versus home prepared
- Designing a family budget
- Calculating health-care costs for a family

(continued)

Figure 5-2 (continued)
Family and Consumer Sciences Education Curriculums
Sample Mathematics Skills

Living Environments

Budgeting using computer software applications
Using computer-aided drawing in the field of interior design
Estimating cost comparisons of housing alternatives
Comparing costs of renting versus buying a home
Determining insurance needs and costs
Calculating and/or evaluating energy costs
Determining arrangement of furniture in relation to space needs
Using scales and rulers with floor plans
Calculating yardage needed for floor coverings, upholstery, fabric, wallpaper and paint
Estimating costs of purchasing equipment
Comparing energy consumption and savings on appliances

Fashion and Textile Technology

Conducting an analysis of an individual's body proportions using computer software
Figuring project costs versus ready-made
Determining fabric amounts needed
Using a yard/meter stick, ruler, tape measure and seam gauge
Determining correct measurements
Calculating metric conversions
Making pattern alterations

Personal Management

Applying mathematics to real-life situations using computer software
Learning how to handle a checking account
Figuring credit costs, determining interest rates
Developing banking skills
Practicing budgeting skills
Figuring income taxes
Making salary calculations
Figuring and paying bills
Calculating utility costs
Estimating gas mileage
Figuring and making correct change for purchases
Calculating cost of insurance
Learning to make investments
Comparing costs versus dollar benefits of jobs
Planning a budget
Estimating costs connected with travel activities
Determining how to get the most from recreation dollars
Evaluating a purchase
Estimating costs assumed with purchasing a car

Integrating Science into the Curriculum

To help students meet workplace requirements and acquire a broad-based, practical scientific literacy, schools must develop a new approach to teaching science. This approach should combine rigorous training in scientific principles and their practical application with a flexible approach appropriate for a wide range of students. Where traditional science curriculums have tended to segregate students based on ability, applied science/technology programs focus on their common educational needs, with an emphasis on helping low- and high-ability students develop a broad knowledge base while acquiring personal and workplace skills.

Competencies in applied science that can be adapted into the family and consumer sciences education curriculum are shown in Figure 5-3 (page 78). Sample science skills are illustrated in Figure 5-4 (pages 79-80).

Integrating Communication into the Curriculum

During the 1980s, high school language arts programs were criticized by business and industry leaders for failing to provide workers with the necessary reading, writing, listening and speaking skills. As a result, corporations began investing millions of dollars to educate workers in basic communication skills as well as goal-setting, problem-solving and conflict-resolution skills.

To reinforce the urgency of these needs, in 1988 the American Society for Training and Development developed a list of key skills employers want. These provided a basis for courses and units in applied communications that focus largely on the training needed for real-world and career success. During the past five years, these curriculums have become popular in secondary and postsecondary schools nationwide.

Applied communications within family and consumer sciences education courses should be part of a comprehensive communications curriculum. The curriculum should emphasize technical and practical reading, writing, speaking and listening skills, with a strong element of group process and conflict resolution, negotiation skills, leadership training and problem solving. Competencies in applied communications that relate to family and consumer sciences are shown in Figure 5-5 (page 81).

Tech Prep/Applied Academics Initiative

The Tech Prep/Applied Academics initiative — introduced to Connecticut in 1990 — was conceived to prepare students for the world and workplace by helping students to acquire stronger mathematics, science, communication and technology skills. Funded though the federal Carl D. Perkins Vocational and Applied Technology Education Act and endorsed by many employers, this initiative requires a more practical orientation toward teaching students how to use their knowledge in their roles as workers, citizens and lifelong learners.

In contrast to the traditional approach, Tech Prep/Applied Academics moves from the concrete and specific to the abstract and general, from practice to theory, and from the familiar to the unfamiliar. Appropriate for both college-bound and noncollege-bound students, these rigorous applied courses emphasize hands-on learning in laboratory environments and apply scientific and communication principles to real-world and workplace tasks. In the process, students develop reasoning, decision-making and problem-solving skills, as well as creative thinking and the ability to acquire and use academic knowledge effectively.

Tech Prep/Applied Academics teaches academic skills within a contextual framework related to life and workplace needs. Actively engaged in the learning process, students are more likely to be motivated, enthusiastic and high achievers. The programs:

- use practical applications from real-world and workplace situations to teach communication, mathematics, science, technology and other subject areas;
- engage students in the learning process by making instruction more relevant to their needs and goals;
- focus on hands-on, laboratory-style activities; and
- integrate and sequence curriculums to give more students maximum exposure and access to the various disciplines.

In Connecticut, individual or sequenced occupational courses may be included as part of the program structure. Courses may be coordinated with local community-technical colleges, and students can earn college credit toward a planned program in the occupational area selected.

Figure 5-3
Competencies in Applied Science

Science Review	◆ Understanding how scientists obtain knowledge ◆ Realizing the importance of using the scientific method to solve many everyday problems ◆ Appreciating the impact of science and technology and its role in our lives today ◆ Understanding that advances in technology can lead to increased productivity
Basic Science Skills	◆ Solving everyday and science/technology-based problems through observation, analysis, evaluation, classification, interpretation of data, and the ability to draw conclusions and predict outcomes ◆ Demonstrating accuracy and precision in computing data ◆ Appreciating the need for conservation, preservation and wise use of resources ◆ Developing a positive attitude toward the contributions of science and technology in shaping the world and helping people meet their responsibilities toward society
Biology Concepts	◆ Learning the functions and vital processes of living organisms ◆ Realizing the implications of humans in the environment ◆ Understanding that all life comes from life ◆ Learning how to care for the body through proper nutrition, health and sanitary practices ◆ Questioning the implications of social/ethical biology ◆ Realizing the Earth is a closed system in space with limited resources that must be preserved
Chemistry Concepts	◆ Recognizing chemistry as an experimental science ◆ Understanding that life is a chemical process ◆ Learning about chemical and physical changes ◆ Knowing that compounds can be altered to form different and new compounds ◆ Appreciating the importance of plastics and synthetics in a modern society
Physics	◆ Recognizing that work, energy and power are related concepts ◆ Understanding the concepts of light, heat, and conservation of matter and energy
Anatomy and Physiology	◆ Understanding human anatomy and physiology
Computer Technology	◆ Learning new science skills and solving science problems ◆ Preparing scientific reports with graphs, charts and diagrams ◆ Testing skills and knowledge

Figure 5-4
Family and Consumer Sciences Education Curriculums
Sample Science Skills

Nutrition and Food Technology

- Understanding the functions of ingredients
- Learning how to make recipe substitutions
- Learning functions of nutrients
- Determining nutrient consumption based on recommended daily allowances (RDA)
- Understanding effects of diet and exercise on body function
- Analyzing sanitation practices
- Conducting culture tests on food-related bacteria
- Researching proper food storage and food preservation techniques
- Studying methods of preparation and their effect on the nutritional quality of foods
- Experimenting by varying temperature and determining its effect on the food product
- Learning about quality control in food preparation
- Retaining food nutrients during storage, preparation and serving
- Reviewing the principles of microwave cooking
- Learning about the theories behind weight-loss diets
- Understanding nutrient deficiencies and their effects on the body
- Understanding the functions of digestive organs

Child Development

- Understanding human physiology and reproduction
- Discussing the effects of diseases (nutritional, pathogenic, genetic) upon the physiology of children
- Studying the biological aspects of development
- Analyzing contraceptive measures
- Learning about prenatal development and birth defects
- Recognizing both desirable growth patterns and growth problems in children
- Relating periods of growth to the responsibilities and benefits associated with life cycle changes
- Assessing ethical issues such as world hunger and resource allocation
- Understanding how to apply first aid treatments and how to care for ill children
- Understanding sanitation in relation to child-care practices
- Teaching science orientation skills to young children
- Reviewing communicable childhood diseases
- Classifying burns by degree

Family Life

- Learning measures to take to prevent childhood illnesses
- Determining basic hygiene practices to reduce chances of illness
- Classifying personal views affecting consumer decisions as values, needs or goals
- Making consumer choices based on a sound hypothesis of outcome
- Showing the need for people to conserve, preserve and make wise use of resources
- Applying the scientific method in collecting and interpreting consumer information
- Distinguishing between the biological and environmental influences that contribute to an individual's development
- Describing examples of parent-to-child, parent-to-parent and child-to-child relationships which show the dependence of family members on each other
- Describing critical thinking and the use of scientific inquiry in assessing changes in male-female roles and responsibilities in contemporary society

(continued)

Figure 5-4 (continued)
Family and Consumer Sciences Education Curriculums
Sample Science Skills

Living Environments

Describing ways to prevent bacterial contamination in the bath, kitchen and other parts of a house or other building
Identifying hazardous chemical components of products and chemical reactions that can occur
Recognizing the potential for contamination and pollution caused by improper use and disposal of various chemical products
Recognizing the role of force, balance and height in the incidence of falls and injuries
Learning about home and building energy efficiency
Studying options for cutting energy costs
Researching style and construction of buildings in relation to climatic conditions
Understanding the use of color in relation to energy efficiency/size illusions

Fashion and Textile Technology

Understanding the chemical components and characteristics of fibers
Conducting fabric reaction tests to observe environmental and chemical changes
Classifying fibers as natural or synthetic
Learning about the treatment of fibers
Using the microscope to analyze fibers and/or weaves
Understanding the chemistry behind stain removal techniques
Conducting comparisons of different laundry products
Identifying properties desired in common household textiles and materials used in furniture and equipment
Identifying the thermal conduction and sound absorption capacity of carpet, upholstery and other textiles used in furnishing buildings and homes
Recognizing optical illusions of design in relation to dress
Studying the effect of colors in relation to figure and skin tone

Personal Management

Identifying physical changes that take place during adolescence and how these changes affect grooming standards and practices
Explaining the scientific basis for grooming practices such as regular baths and dental care
Relating special health problems to poor personal hygiene practices
Identifying the chemical components that are standard ingredients in common grooming aids
Recognizing Food and Drug Administration (FDA) standards for cosmetics and other grooming aids
Identifying reactions and side effects which may occur with the use of grooming aids
Recognizing the physical and chemical breakdown of cosmetics which may occur during extended periods of shelf life and use

Figure 5-5
Competencies in Applied Communications

General Communication	◆ Communicating clearly and concisely ◆ Using reading, writing and listening skills to solve job-related problems ◆ Distinguishing fact from opinion ◆ Using language, tone, style, format and vocabulary appropriate for the purpose and audience ◆ Using print and nonprint sources to gather information ◆ Identifying a communicator's purpose
Reading	◆ Reading and following complex directions ◆ Finding, understanding and applying information from a variety of sources (books, manuals, computer printouts, etc.) ◆ Interpreting text and graphic information (reports, maps, charts, graphs, diagrams, etc.) ◆ Adjusting reading strategy to purpose and type of reading (skimming, scanning, reading in depth)
Writing	◆ Writing logical and understandable statements or phrases to accurately fill out commonly used forms ◆ Composing unified and coherent correspondence, directions, descriptions, explanations and reports ◆ Summarizing and taking notes from various sources ◆ Preparing graphics (tables, diagrams, graphs and drawings) for the purpose of communicating information ◆ Using accepted standards of grammar, punctuation, capitalization and spelling
Speaking	◆ Determining when more information is needed by asking questions ◆ Participating in formal and informal group discussions and decision making ◆ Preparing and delivering information in formal and informal situations ◆ Giving oral instructions simply and clearly ◆ Using accepted standards of grammar ◆ Adjusting content and style to the listener and purpose ◆ Restating or paraphrasing a conversation to confirm one's own understanding of what was said
Listening	◆ Following oral instructions ◆ Identifying relevant information in oral messages ◆ Demonstrating attention and courtesy when listening ◆ Identifying when a response is needed
Computer Technology	◆ Learning writing concepts together with word processing skills ◆ Using software programs to prepare charts, drawings and graphs to communicate effectively

Equity and Diversity 6

What is Gender Equity?

What is Diversity?

Working with a Diverse Student Population

What is Gender Equity?

Gender equity is equal treatment and equal opportunity for all individuals regardless of their gender. It means:

- freedom from favoritism based on gender;
- informed choices for students so they can select educational programs and careers based on their values, interests and abilities;
- affirmative messages which communicate respect to students and enhance their self-image, rather than limiting it; and
- support to students who have chosen to participate in nontraditional programs.

The promotion of gender equity in education programs involves creating an educational environment that helps students free themselves of limiting sex-role expectations and fosters preparation for future family and work roles.

What Behaviors Limit Gender Equity?

No matter how fair we think we are, we are all influenced subtly by societal expectations. Before we can begin to change, we must recognize the assumptions and behaviors that limit our fair treatment of others. These include:

- **Gender-role stereotyping** — Attributing behaviors, abilities, interests, values and roles to a person or group of persons based on their gender. Examples are beliefs such as "girls are terrible at math and computers" or "boys are not capable of caring for children."
- **Gender bias** — The belief (often unconscious) in gender role stereotypes which often results in certain biased behaviors. Examples are not encouraging girls to take advanced mathematics courses or discouraging boys from participating in home economics or child-care courses.
- **Gender discrimination** — Any action (usually deliberate and conscious) that intentionally limits or denies opportunities, privileges, roles or rewards on the basis of gender. Examples would be not allowing girls to join the computer science club or boys to participate in the volunteer nursing assistant program.

The six most prevalent forms of bias present in curriculum materials and the classroom environment and interactions are:

- **Invisibility** — Women and members of culturally diverse populations have been underrepresented in curriculum materials.
- **Stereotyping** — By assigning traditional and rigid roles or attributes to a group, instructional materials stereotype and limit the abilities and potential of that group. Stereotyping denies students a knowledge of the diversity, complexity and variation of any group of individuals.
- **Imbalance/selectivity** — Some textbooks and other instructional materials perpetuate bias by presenting only one interpretation of an issue, situation or group of people. An imbalanced account restricts students' knowledge of the varied perspectives that may apply to a situation.
- **Unreality** — Frequently, textbooks and other instructional materials have presented an unrealistic portrayal of history and the contemporary life experience. Controversial topics are glossed over, and discussions of discrimination and prejudice are avoided. Unrealistic coverage denies students the information they need to recognize, understand and eventually overcome many of society's problems. To overcome this bias, educators need to be aware of their own patterns as they provide response opportunities, offer feedback and interact informally with students.
- **Fragmentation/isolation** — By separating issues related to women and members of culturally diverse populations from the main body of the text, instructional materials imply that these issues are less important and not a part of the cultural mainstream. Purposeless separation serves as a divisive influence and distracts from the goal of gender equality.
- **Linguistic bias** — The imbalance of word order and lack of parallel terms referring to females and males are forms of linguistic bias. Sex-biased words such as "mankind" and "salesman", and the reliance on the male pronoun "he" to refer to both males and females, are examples of sexist language patterns.

What are the Positive Effects of Gender Equity?

Gender equity frees males and females to grow and develop according to their own needs, values, abilities and interests. It fosters mutual trust as persons of both genders are unrestricted in their life roles.

Gender equity allows men and women to pursue all types of occupations, including nontraditional occupations that can lead to personal and job satisfaction. For women, especially, these nontraditional jobs also can mean better wages and benefits than are usual in traditionally "female" occupations.

Elimination of sexism and biased language in education, the media and the job market can improve the way males and females feel about themselves and their life goals.

Gender equity activities are deliberate efforts to:

- eliminate gender-role stereotyping, bias and discrimination;
- expand career opportunities and develop the talents of all people;
- build partnership skills;
- enhance men's and women's abilities to work together productively; and
- establish and maintain stable, satisfying relationships.

Laws Governing Gender Equity

- The Carl D. Perkins Vocational and Applied Technology Education Act provides federal resources for vocational education. It focuses on sex equity in vocational education, encourages nontraditional enrollments, and targets single parents and homemakers through sex-equity programs.
- Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race and national origin against all individuals, including students and employees of educational institutions. Its provisions also have been interpreted to prohibit discrimination on the basis of gender.
- Title IX of the Educational Amendments of 1972 prohibits discrimination on the basis of gender against students and employees by educational institutions receiving federal funds.
- The Equal Pay Act of 1973 requires an employer to pay equal wages to men and women working in the same establishment at jobs requiring the same skills, responsibilities and work conditions. The law exempts pay differences based on seniority, a merit system, production or any factor other than gender.
- The Equal Employment Opportunity Commission Guidelines of 1980 define sexual harassment and interpret Title VI as prohibiting it.
- Executive Order 11246 prohibits discrimination by federal contractors and requires affirmative action for women and members of culturally diverse populations.
- The Civil Rights Act of 1991 allows women, people with disabilities and members of religious minorities to collect monetary damages in cases of intentional employment discrimination, with a limit of $50,000 for those victims who work for employers with 100 or fewer employees.

Achieving Equity through the Curriculum

The Ideal Curriculum: Ingredients, Strategies and Pitfalls

From *AAUW Issue Brief: Creating a Gender-Fair Multicultural Curriculum*. Washington, D.C.: American Association of University Women, June 1992. Used with permission.

Ingredients

The ideal gender-fair multicultural curriculum:

- Incorporates the best of the "new scholarship" on gender, race, ethnicity and class. This scholarship is particularly prominent in history, social studies and literature.
- Provides every student with knowledge of the wide range of American cultures, as well as competence in using the tools of our shared culture and the ability to critique this culture from multiple perspectives.

- Encompasses and affirms all of our past, denying none of it.
- Uses textbooks and materials that present multiple perspectives, showing women, men and all cultural groups — not just elites — as active participants, producers, and do-ers in their families, occupations, communities, cultures and societies.
- Draws on the multicultural resources of the local community.
- Coordinates content, attitudes and skills across the curriculum and across grade levels.
- Promotes use of a wide range of teaching practices designed to play to the strengths of all learning styles. (The new scholarship on learning styles will be especially helpful in science, math and the communication arts.)
- Links the curriculum to a gender- and culture-balanced assessment system that provides opportunities for both performance reviews and testing. The questions and tasks used in these reviews and tests would include a diversity of settings and cultural backgrounds.

Strategies

These strategies can help develop a curriculum reform process that will effectively bring together everyone involved in the schools:

- Bring many voices into the debate by ensuring diverse representation on committees of experts and by encouraging public comment from a range of diverse groups.
- Combine top-level clout with grass roots involvement.
- Insist that curriculum review/design committees include teachers, representating all grade levels and disciplines.
- Focus on expanding — not attacking — the traditional curriculum.

Pitfalls

These dynamics can damage the process:

- Misleading labeling — Some curriculum proposals are portrayed as being multicultural, but the content isn't there.
- Dueling ethnocentric curricula — Trading one ethnocentric curriculum for another is self-defeating.
- The truth monopoly — Defenders of the traditional curriculum tend to present it as "objective truth" that will be distorted by including the findings of the new scholarship. But the real question is: What does the best scholarship — both old and new — tell us about our society? The answers belong in the curriculum.
- Polarizing rhetoric — The debate should not be framed as a choice between mutually exclusive absolutes. Look for a "win-win" solution that each participant can support.
- Teacher bashing — Don't join those who blame teachers for every deficiency in student performance.

From *AAUW Issue Brief: Creating a Gender-Fair Multicultural Curriculum.* Washington, D.C.: American Association of University Women, June 1992. Used with permission.

What is Diversity?

Diversity can be defined as the wide array of human qualities — whether inherited or acquired — that distinguish people as individuals or groups on the basis of differences that can carry significant social or cultural meanings. These differences frequently stem from age, gender, race/ethnicity, sexual orientation, physical/mental disability, social class, religious beliefs and learning styles.

Because curriculum guides are the basic tools for translating educational ideals, visions and goals into reality, they need to recognize, value and affirm diversity.

A diverse curriculum incorporates instructional strategies that address ***all*** students' preferred ways of learning, rather than assuming that students share the same socioeconomic background, value system and learning style.

Curriculum guides call for a higher order of learning that includes all students, as well as a higher order of teaching that is targeted to all students, asks for feedback, involves cooperative learning and teamwork, and encourages inclusion.

The following two articles address the need for and importance of diversity and multicultural education.

The Multilingual/Multicultural Classroom

"The Multilingual/Multicultural Classroom" by Sandra J. Briggs. Adapted and reprinted, with permission of the author and the publisher (Kappa Delta Pi, an International Honor Society in Education), from the *Kappa Delta Pi Record*, Vol. 28, No. 1, Fall 1991, p. 11-14.

You are a good teacher concerned with reaching all of your students. When some of those students are not native speakers of English, you worry that you don't have the expertise or the time to help them. How can you teach the whole class and still give all students the support they need to survive in your classroom? The purpose of this article is to give you a few helpful suggestions.

Make Your Classroom A Welcoming Comfortable Place. Let students know there is no division between "we" and "they" in your classroom. All students are there to work and to learn together. Help create a climate of respect in which students feel free to express their ideas and to learn from others. A classroom is a laboratory where students are safe to experiment, but where no one is allowed to make fun of anyone. Teachers and students support, teach, and learn from one another. If the teacher seriously models these ideas for students, the class will become a welcoming, comfortable place for all.

Use Many Ways To Get The Point Across. Imagine a classroom full of students listening to a recorded voice, but where they don't see the person speaking and nothing is written down. There are no other cues to help the students focus, learn or remember. Fortunately, classes usually don't happen in that kind of a vacuum. Students need many ways of understanding the teacher's message.

Use Gestures. Turn down the volume on the TV sometime and just watch the action. How much can you understand without the words? Are you talking about pouring a liquid into a container? Make the motion with your hands. Is a character in the story you are reading "pacing nervously"? Show the students what nervous pacing looks like. Think of your gestures in class as reinforcing what you say.

Use Visuals. Put simple diagrams on the board. Draw stick figures that help get your point across. Use pictures and actual objects. A lesson on measurement in a math class will be much more effective if you use rulers and string to measure objects.

Write Down Important Information. Some teachers hand out assignment pages for a week or a quarter. Others have a corner of the chalkboard where all assignments are written, including the date, the assignment and the due date. When talking in class, teachers will often write important words on the board.

Check Frequently For Understanding. A recorded voice goes on and on regardless of whether students are listening or whether they understand. Don't let that happen. Frequently check for understanding in your class. That doesn't mean asking, "Do you understand?" or "Do you have any questions?" Do mini-checks. "Who has an example of supply and demand?" "If you think the answer to this problem is 15, give the thumbs-up sign. If it isn't, give thumbs down." After an assign-

ment, ask the students to explain what they are supposed to do. You may ask specific questions: "Are you supposed to copy the questions before you write the answers?" "What are you going to do after you read the chapter?" "How long should your letter be?" Ask one student to explain some part of the lesson to another student, and encourage that second student to ask questions.

Actively Involve Students. A good technique to use is called total physical response (TPR). The teacher says, "Stand up," and students stand up. The teacher says, "Touch your nose," and students touch their noses. You can actually get quite sophisticated with TPR. In a physical science class, students will understand rock classifications better if they actually have to handle rocks and make decisions about them. In a history class, students will understand better what it feels like to come to America on a cramped, small ship if they have to reenact a scene on that ship. Students remember best what they have actually touched or done.

Use Cooperative Learning And Other Types Of Pair And Group Work. The more time students spend gathering information, discussing, working and learning together, the more they really learn. In general, pairs work well because students communicate with only one person. Avoid groups of three, because this can result in two students against one. Look for tasks that require working together, and make sure each student has a specific and well-defined task. Set up heterogeneous groups representing males and females and various languages.

It is helpful to prepare for cooperative learning beforehand, including training students for group roles. Set simple rules. Set up roles to be used in the groups, and be sure students know what each role involves. Start with simple tasks because students need to concentrate on learning the social and interactive skills of cooperation. Create groups that will last for a quarter. Seat group members near one another so the students are close when you do a cooperative learning task.

Well-structured assignments will give all students the confidence that they know what they have to do and that they can contribute. It can be less threatening for students to express their ideas in a small group, and, if the group is together on an ongoing basis, they can get to know a few students quite well. (See the bibliography, for example, Cohen, *Designing Groupwork*, 1986.)

Focus On Communication. The more the teacher focuses on communication, the more experience students have with English. The ideas and experiences they share are important; the grammar and pronunciation errors they make are not. Of course, in important speeches and in letters to the editor of a newspaper, the students will want to be sure their English is perfect. Then, the teacher can help them edit their work, or have students peer edit. But don't make too many grammar and vocabulary corrections when communication is the true focus of the lesson.

Discuss Learning Strategies. Focusing on strategies for learning can be an important tool. A teacher sometimes asks innocently, "How did you learn that?" Usually students will say they read it, or they just knew it. Then ask them to watch carefully what they do. Work on these approaches among others:

- *What Do Students Already Know?* When students are presented with something to learn, they need to ask themselves what they already know about the subject. They can use that to help themselves learn more. A student can learn and retain information that relates to something he/she already knows.
- *Listen and Read Actively.* Students need to ask themselves questions before they read or listen, and then check for the answers while reading and listening. The process includes asking questions during the whole reading and listening session. When students are finished, they can ask themselves what they have read or heard.

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- *Take Notes.* Students need to get beyond writing everything down. Can they use symbols? Can they use pictures? Can they write questions in their notes? They can share special ways they organize their notes.
- *Use a Textbook Wisely.* How is it organized? What can be learned from the table of contents, from the pictures and diagrams, from section headings? Does the text have key words in boldface? Is there a glossary at the back? Do the chapters include summaries?

These are study skills. Making students aware of their own study skills and how they might improve them can be very powerful. It gives students a chance to see how other students learn. Some of the strategies used in an American high school may be very different from those in their native countries. (See the bibliography, for example, O'Malley and Chamot, *Learning Strategies in Second Language Acquisition*, 1990.)

Use Students' Experiences And Interests. When students can relate what is going on in the classroom to their lives, they learn more and retain the knowledge longer. They can write with more immediacy and can share more with other students. A great deal can be learned about students if they bring their own experiences into the class. Most take their own experience for granted and don't realize how interesting it can be to others.

Have Varied Ways Of Assessing Your Students. There are many ways to demonstrate having understood a novel. Students can show their understanding in these ways:

- They keep a literature log while they read the book by taking notes on the right side of the page. They answer questions on sections of the book and record their reactions on the left side. They also illustrate these logs.
- The students prepare a project on the novel. A project can include a song about the main character, a newspaper with articles about events in the novel, collages, drawings, letters written to the main character, a diary written from one character's point of view, a diagram of the setting of the novel, and a chapter written to explain what happened after the end of the book.
- Students take an exam with both essay and multiple choice questions, using their literature log during the test. In a history class, a student who would have trouble writing a five-page paper on manifest destiny may be able to do a wonderful poster built around the metaphor of the U.S. as an octopus pulling in new territory.

Both You And Your Students Need To Be Organized. It will help students if there is a special place on the board to write assignments. Assigning big projects in small parts can mean more learning and better projects. For instance, some teachers require that students give a three- to five-minute speech demonstrating something. First their topic is due, then the outline, the note cards, and finally the speech. When they get to the speech, they've had many opportunities to get clarification on words and ideas, so they can go into the speech with confidence.

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Multicultural Education and School Reform

From *Affirming Diversity: The Sociopolitical Context of Multicultural Education* by Sonia Nieto. Copyright © 1995, 1992 by Longman Publishers. Reprinted with permission.

A Definition of Multicultural Education

Multicultural education in a sociopolitical context can be defined as follows:

> Multicultural education is a process of comprehensive school reform and basic education for all students. It challenges and rejects racism and other forms of discrimination in schools and society and accepts and affirms the pluralism (ethnic, racial, linguistic, religious, economic, and gender, among others) that students, their communities and teachers represent. Multicultural education permeates the curriculum and instructional strategies used in schools, as well as the interactions among teachers, students and parents, and the very way that schools conceptualize the nature of teaching and learning. . . .

Multicultural education is *basic education.*

Multicultural education is *important for **all** students.*

Multicultural education is *pervasive.*

Multicultural education is *education for social justice.*

Multicultural education is *a process.*

Multicultural education is *critical pedagogy.*

Each of these components will be described in more detail in the following pages.

Multicultural Education is Basic Education

Given the recurring concern for the "basics" in education, it is absolutely essential that multicultural education be understood as basic education. Multicultural literacy is as indispensable for living in today's world as are reading, writing, arithmetic, and computer literacy. When multicultural education is unrelated to the core curriculum, it is perceived as unimportant to basic education. . . .

No school can consider that it is doing a proper or complete job unless its students develop multicultural literacy. What such a conception might mean in practice would no doubt differ from school to school. At the very least, however, we would expect all students to be fluent in a language other than their own; aware of the literature and arts of many different peoples; and conversant with the history and geography not only of the U.S. but also of African, Asian, Latin American and European countries. Through such an education, we would expect our students to develop the social skills to understand and empathize with a wide diversity of people. Nothing can be more basic than this.

Multicultural Education is Important for *All* Students

There is a widespread perception that multicultural education is only for students of color or for urban students or for so-called "disadvantaged" students. This belief is probably based on the roots of multicultural education, which grew out of the Civil Rights and equal education movements of the 1960s. The primary objective of multicultural education was defined as addressing the needs of those students who had historically been most neglected or miseducated by the schools, primarily students of color. In trying to strike more of a balance, it was felt that attention should be paid to developing curriculum and materials that reflect the reality of these students' history, culture, and experience and that this curriculum should be destined particularly for inner-city schools populated primarily by

children of color. This thinking was historically necessary and is understandable even today, given the great curricular imbalance that continues to exist in most schools. . . .

Multicultural education is by definition expansive. Because it is *about* all people, it is also *for* all people, regardless of their ethnicity, language, religion, gender, race, or class. It can even be convincingly argued that students from the dominant culture need multicultural education more than others, for they are often the most miseducated about diversity in our society. In fact, European American youths often feel that they do not even *have* a culture, at least not in the same sense that clearly culturally identifiable youths do. At the same time, they also feel that their way of living, of doing things, of believing, and of acting are simply the only possibilities. Anything else is ethnic and exotic. . . .

Multicultural education, being an alternative approach, is often considered to be most appropriate for children "at risk" of educational failure. There is a faulty conception concerning who such students are. The feeling is that students of color and those from economically oppressed families are most at risk. A comprehensive national study, however, found that between 25 and 35 percent of *all* students in the U.S. are seriously at risk. Even these figures are considered to be artificially low. Although race, ethnicity, social class, and limited English proficiency may indeed be "risk factors" for school success, at least in terms of how schools are currently organized, most students identified as being at risk in this survey were white and middle class. Yet the term itself has become a code word for students of color from inner-city schools or poor students of all cultural backgrounds from rural and urban schools.

Students at risk of educational failure can and do come from all social and cultural backgrounds and find themselves on the periphery of the educational environment for a variety of reasons. Perhaps a more appropriate term for such students is *marginal*, as used by Sinclair and Ghory [educational researchers, 1987]. This term implies that the conditions for the failure of students are not inherent in the students themselves but rather in the learning environments created for them. By changing the environments, the so-called risk factors are reduced and marginal students again enter the educational center. A broadly conceptualized multicultural education focusing on school reform represents a substantive way of changing the curriculum, the environment, the structure of schools, and instructional strategies so that all students can benefit.

Multicultural Education is Pervasive

Multicultural education is sometimes thought of as something that happens at a set period of the day, yet another subject area to be "covered." In a few school systems, there is even a "multicultural teacher" who goes from class to class in the same way as the music or art teacher. Although the intent of this approach may be to formalize a multicultural perspective within the standard curriculum, it is in the long run self-defeating because it tends to isolate the multicultural philosophy from everything else that happens in the classroom. By letting classroom teachers not take responsibility for creating a multicultural approach, this strategy often alienates them by presenting multicultural knowledge as somehow contradictory to all other knowledge. The schism between what is "regular" and what is "multicultural" widens. In this kind of arrangement, classroom teachers are not encouraged, through either formal in-service programs or alternative opportunities, to develop an expertise in multicultural education. It becomes exotic knowledge that is external to the "real" work that goes on in most classrooms. Given this conception of multicultural education, it is no wonder that teachers sometimes feel that it is a frill they cannot afford.

A true multicultural approach to education is pervasive. It permeates the physical environment in the classroom, the curriculum, and the relationships among teachers and students and community. It can be seen in every lesson, curriculum guide, unit, bulletin board, and letter that is sent home; it can be seen in the process

by which books and audiovisual aids are acquired for the library, the games played during recess, and the lunch that is served. Seen in this way, multicultural education is a philosophy, a way of looking at the world, not simply a program or a class or a teacher. In this comprehensive way, multicultural education helps us rethink school reform. . . .

In other less global but no less important ways, the multicultural school would probably look vastly different as well. For example, the lunchroom might offer a variety of international meals, not because they are "strange" or exotic delights but because they are the foods people in the community eat daily. Sports and games from all over the world might be played, and they would not all be competitive. Letters would be sent home in the languages that parents understand. Children would not be punished for speaking their native language; on the contrary, they would be encouraged to do so and to teach their classmates and teachers as well. In summary, the school would be a learning environment in which curriculum, pedagogy, and outreach are all consistent with a broadly conceptualized multicultural philosophy.

Multicultural Education is Education for Social Justice

All good education connects theory with reflection and action, which is what Paulo Freire [an international multicultural education leader, 1970] defines as *praxis*. In particular, developing a multicultural perspective means learning how to think in more inclusive and expansive ways, reflecting on what we learn, and putting our learning into action. Multicultural education invites students and teachers to put their learning into action for social justice. Whether debating an issue, developing a community newspaper, starting a collaborative program at a local senior center, or beginning a petition for the removal of a potentially dangerous waste treatment plant in the neighborhood, students learn that they have power, collectively and individually, to make change. . . .

Multicultural Education is a Process

Curriculum and materials represent the *content* of multicultural education, but multicultural education is above all a *process*. First, it is ongoing and dynamic. No one ever stops becoming a multicultural person, and knowledge is never complete. Thus, there is no established "canon." Second, it is a process because it involves relationships among people. The sensitivity and understanding teachers show their students are often more important than the facts and figures they may know about the different ethnic and cultural groups. Third, and most important, multicultural education is a process because it focuses on such intangibles as teachers' expectations, learning environments, students' learning styles, and other cultural variables that are absolutely essential for schools to understand to be successful with all of their students. . . .

Multicultural education must be accompanied by "unlearning" conventional wisdom as well as dismantling the policies and practices that disadvantage some students. Teacher education programs would be reconceptualized to include awareness of such intangibles as learning styles and other cultural influences on learning, the persistence of racism and discrimination in schools and society, and instructional and curricular strategies that encourage learning among a wide variety of students. Teachers' roles in the school would also have to be redefined since empowered teachers help to empower students. The role of parents would no doubt need to be expanded so that the insights and values of the community could be more faithfully reflected in the school. A complete restructuring of curriculum and of the organization of schools is what is called for. The process is complex, problematic, controversial, and time-consuming but one in which teachers and schools must engage to make their schools truly multicultural.

Multicultural Education is Critical Pedagogy

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What does critical pedagogy mean in terms of multicultural education? A critical pedagogy ensures that cultural and linguistic diversity is acknowledged rather than suppressed, as is often the case. According to Cummins, because "transmission models" exclude and deny students' experiences, they cannot be multicultural: "a genuine multicultural orientation that promotes minority student empowerment is impossible within a transmission model of pedagogy."

A few examples of how the typical curriculum discourages students from thinking critically, and what this has to do with a multicultural perspective, are in order. In most schools, students learn that Columbus discovered America; that the United States was involved in a heroic westward expansion until the nineteenth century; that Puerto Ricans were granted U.S. citizenship in 1917; that enslaved Africans were freed by the Emancipation Proclamation in 1863; that the people who made our country great were the financial barons of the previous century; and if they learn anything about it at all, that Japanese Americans were housed in detention camps during World War II for security reasons. . . .

Critical pedagogy is not simply the transfer of knowledge from teacher to students, even though that knowledge may contradict what students had learned before. Thus, learning about the internment of Japanese Americans during World War II is in itself not critical pedagogy. It only becomes so when students critically analyze different perspectives and use them to understand and act on the inconsistencies they uncover. A multicultural perspective does not simply operate on the principle of submitting one "truth" or perspective for another. Rather, it reflects on multiple and contradictory perspectives to understand reality more fully. In addition, it uses the understanding gained from reflection to make changes. Thus, teachers need to learn to respect even those viewpoints with which they may disagree, not to teach that which is "politically correct," but rather to teach students to develop a critical perspective about what they hear, read or see. . . .

Critical pedagogy is also an exploder of myths. It helps to expose and "de-mythify" some of the truths that we have been taught to take for granted and to analyze them critically and carefully. Justice for all, equal treatment under the law, and equal educational opportunity, although certainly ideals worth believing in and striving for, are not always a reality. The problem is that we teach them as if they were always real, always true, with no exceptions. Critical pedagogy allows us to have faith in these ideals without uncritically accepting their reality.

Critical pedagogy is based on the experiences and viewpoints of students rather than on an imposed culture. It is therefore multicultural as well because the most successful education is that which begins with the learner. Students themselves are the foundation for the curriculum. Nevertheless, a liberating education takes students beyond their own limited experiences, no matter what their background.

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Working with a Diverse Student Population

Each student possesses unique physical, cultural, linguistic, intellectual and psychological characteristics that represent both strengths and challenges to the student and staff. Opportunities for learning need to address these challenges within the context of an integrated and coordinated instructional program.

When appropriate, access to educational opportunities within the general educational environment must be available to all students regardless of gender, ability level, race, learning style or physical characteristics. Expectations for success as outlined in *Connecticut's Common Core of Learning* and the State Board of Education document *Working Together for Student Achievement* are intended for all students. Modifications and adaptations to instruction using the general education curriculum most often give students an opportunity for optimal achievement.

It is the challenge of today's teacher to directly address students' individual learning characteristics in order to provide an environment in which students are given an equal opportunity to learn, achieve and become successful, contributing members of society. This requires the involvement of students, parents, administrators, pupil personnel staff members, support personnel and community leaders working together to achieve those goals.

Maintaining High Expectations While Accommodating Individual Differences

It is critical that staff members maintain high expectations and standards for all students. Strategies for accommodating individual differences are intended to give students an opportunity to benefit from instruction. Accommodating individual student differences must not lessen the expectations of achievement for those students.

The following interventions can be used in large, small and individualized student learning situations. They may involve adapting the classroom environment, modifying instructional methods, providing motivational strategies, adapting textbooks, providing behavioral interventions and modifying assessment strategies.

Classroom Environment

The classroom environment sets the stage for learning. As Gillet (1986) asserts, "Structure, carefully specified rules and daily routines provide security . . . [and] help the [student] predict events and outcomes." Keep in mind the following:

- It is important for rules and expectations to be clearly defined and followed. To provide for greater ownership, students should be included in the development of classroom rules. Rules and routines should be posted at eye level as reinforcers for students. Remember that most students will need as much notice as possible when there is a change in a classroom rule or routine.
- Schedules and assignments should be posted in a specific place in the classroom. In addition, some students may need a schedule and assignments taped to the desk, table, or clipboard. Students may check off or cross out assignments or schedules as they are completed, reinforcing a sense of accomplishment.
- Long assignments should be broken into several pieces. Term papers or projects can have specific installments (e.g., outline, introduction, draft and final project) that are due on specific dates.
- Use color in the classroom to organize materials. For example, new homework assignments are posted in green, information in red needs immediate attention.
- Have study carrels or a quiet area in the room available for students to work alone. Students should be encouraged to become independent learners by understanding their learning styles and using the classroom environment to meet their needs.
- Attach folders to the sides of desks and tables to keep the top area free from clutter. Colored folders may be used to organize certain projects. A specific color may be assigned to an individual student or groups of students or to a specific subject.
- Background music can be played to help block out auditory distractions.

- The classroom setting should provide students with a variety of learning activities using visual, auditory and kinesthectic modalities, e.g., computer instruction, learning stations.
- Student desks or tables should be in a semicircle or horseshoe arrangement to allow the teacher and students to see each other.

Instructional Methods

Visual, auditory and hands-on instructional techniques provide most students with an opportunity to comprehend information and provide meaning to that information. It is important for the teacher to use a variety of modalities for instruction. In addition, teachers need to plan and develop their lessons in order to reinforce important concepts for their students.

Chalmers (1991) suggests some *general guidelines* that can be helpful to all students:

1. *Preteach vocabulary and preview major concepts.* . . .
2. *State a purpose for reading.* Give students something specific to look for before they begin reading (e.g., why something happened, characteristics, descriptions). . . . Having the questions written out for the students will facilitate their reading comprehension as they read.
3. *Provide for repetition of instruction.* Such techniques as choral response, group work, examples, drill, study guides, and the incorporation of verbal instruction with written work, board work, hands-on participation, and one-to-one instruction can be used. . . .
4. *Provide clear directions and examples.* Give both oral and written directions. Have students repeat directions back to you. Use examples to demonstrate the procedure required. Make sure the student can demonstrate to you the procedure to be followed. . . .
5. *Make time adjustments.* Do not use time pressure. Allow students to have more time, a shortened assignment, or a different time or setting. . . .
6. *Provide feedback.* Feedback should be provided on every assignment and should be as immediate as possible. . . .
7. *Have students keep an assignment notebook.* Students can record assignments and other important information daily. Keeping a separate notebook or folder for assignments also helps students organize their time and materials. . . .
8. *Provide an alternate assignment.* Make alternative options available (e.g., oral, written, videotape presentation, artwork, drama, tape recorder, typewriter, word processor). . . .
9. *Read orally.* In class, have students read orally in order to encourage discussion and better comprehension. . . .
10. *Allow manipulatives.* Such items as cue cards, charts, number lines, math fact tables, calculators, graph paper, and so forth, can be used to assist students in progressing to the next concept. . . .
11. *Highlight textbooks.* Highlight important information, key concepts, terms, and so forth, for students who are poor readers. . . .

From "Classroom Modifications for the Mainstreamed Student with Mild Handicaps" by Lynne Chalmers, September 1991, *Intervention in School and Clinic*, Vol. 27, No. 1, 40-42, 51. Copyright (1991) by PRO-ED, Inc. Adapted and reprinted by permission.

Additional Strategies

- Visual aids provide students with important information for studying. Materials such as graphic organizers, outlines, story maps, and webs organize materials and help students prioritize information. They are also fun to use and can be tailored to many assignments.
- Use mnemonics (memory strategies) to teach specific information.
- Have students who have difficulty with motor skills and speed circle or underline, rather than write, the correct responses.
- Allow students who have notetaking difficulties to tape the lesson. Another technique is to provide an outline to help with the

notetaking, highlighting the main ideas. Provide sufficient space for additional notes.
- Teach students how to research information (use the library, access on-line information from the computer, etc.).

Adapting Textbooks

Many students encounter textbooks that are written above their reading level and/or are presented in a way that is overwhelming. Teachers can adapt textbooks to meet their students' needs in a variety of ways.

- Units or chapters can be summarized both orally and in writing. Graphic organizers can assist teachers and students with key words and concepts.
- Books can be taped, providing students with another modality to help with comprehension.
- Students can be provided with their own textbooks, with color coding used to highlight key concepts and vocabulary. Notes can be written in the margins.

Motivational characteristics

Cheney (1989) addresses the importance of motivation to student success in this way:

> Even academic materials at an appropriate instructional level and methods of teaching that take learning characteristics into consideration may not be enough to bring academic success to a student with a history of school failure or learning difficulties. Other students find school tasks uninteresting or irrelevant to their daily lives and future goals. This is where the motivational characteristics of the student and motivational qualities of the material or technique must be considered. . . .
>
> . . . Techniques to improve motivation are many and varied, including the following:
>
> - Allow students to set their own goals and graph their progress. . . .
> - Contract, so a given amount of work at an agreed degree of accuracy would earn the student a desired activity or privilege.
> - Allow the students to choose where to work, what tools to use, what to do first, and who to sit by — as long as academic work is being completed.
> - Incorporate drill-and-practice into a game format. . . .
> - Allow extra credit for bonus work.
> - Camouflage instructional materials that may be at a lower instructional level (using folders, covers).
> - Use high-status materials for instructional activities (magazines, catalogues, newspapers, checkbooks, drivers' manual). . . .
> - Allow students to earn points or tokens for exchange for a valued activity or privilege.
>
> **Among the most powerful motivators, however, is student SUCCESS. When students *consistently* are able to complete academic work that is at the appropriate instructional level and presented in a way that is sensitive to their learning needs, few additional motivational elements will be needed.** [emphasis added]
>
> Adapted, with permission, from "The Systematic Adaptation of Instructional Materials and Techniques for Problem Learners" by Christine O. Cheney, *Academic Therapy* 25, no. 1 (September 1989): 25-30.

Teachers will identify and adapt a wide range of other motivational approaches as well. These may include offering students a variety of appropriate creative and critical thinking activities such as cooperative teams, computers and other technology, and hands-on activities.

Behavioral Interventions

The following suggestions will help teachers maintain a positive learning environment that reinforces

high student achievement and appropriate behavior. The degree of the intervention will vary depending upon the characteristics of the students in the class.

- As outlined in the "Classroom Environment" section, the physical arrangement of the classroom, consistent reinforcement of rules, and the use of a variety of instructional techniques and methods will promote positive student behavior.
- Teachers should model appropriate behavior and reinforce students who exhibit that behavior. The behavior should be defined — for example, "Nancy is demonstrating good student behavior by waiting her turn, sharing with others, raising her hand."
- The use of concrete reinforcers (e.g., chips, stickers) will improve student behavior and increase work production. It is important that the reward is appropriate for the individual student. Student preferences should be taken into consideration.
- Redirect inappropriate behavior by changing the activity.
- Meet with the student alone to discuss ways in which to improve behavior.
- Teach students strategies to help them monitor their own behavior (count to 10 before speaking, predict consequences of inappropriate behavior, etc.).
- As long as rules are clearly defined and consistently applied, and students understand the consequences of breaking the rules, students should receive appropriate discipline for their intentional unacceptable behavior.

Assessment Strategies

The following techniques could be used to determine if students have mastered information:

- Prior to testing, give visual organizers to help students prioritize important information.
- Allow for oral testing.
- Allow students to demonstrate mastery by completing a project, conducting an experiment or giving an oral report.
- Assist students with essay questions by allowing them to use a computer.
- To eliminate errors, allow students to write directly in a booklet or on the test rather than copying from a book or the board.
- Divide the test into several sections, giving students natural breaks between sections.
- Provide additional time for students who need it.
- Provide a study carrel or a small group setting for students who may be distracted in the large group.

Additionally, certain grading techniques can be applied to a variety of assessments. The following suggestions are derived from Gillet (1986):

- Score the number correct in relation to the number attempted.
- Mark the number correct, not the number wrong.
- Provide written feedback that identifies specific errors and how to improve.
- Assign separate grades to individual parts of the assignment.
- Grade on content rather than spelling or mechanical errors.

Practices which support teachers and students

Educators need to merge their expertise and resources to develop strong, flexible educational structures that accommodate individual differences (Lipsky and Gartner, 1989). To provide an environment that gives all students an opportunity to learn in a supportive collegial environment, Lipsky and Gartner suggest the following:

1. Delabeling of teachers, that is, eliminating narrow categorical responsibilities in favor of broader responsibilities;
2. Collaboration and consultation among teachers;
3. Greater teacher control over their own time, and variation in the use of students' time . . .;
4. Greater variety in teacher-student interactions, including whole class instruc-

tion, small group work, individual tutoring, managing of peer learning groups, [and] monitoring of student self-scheduled activities; [and]

5. Broader teacher involvement with other adults, including support staff, out-of-school learning resources, and parents.

Effective Schools Research

School effectiveness research and practice have identified a number of characteristics shared by effective schools. Knoll and Meyer (n.d.) provide this summary:

- Principals in effective schools are instructional leaders, who pose high expectations for students and teachers.
- The climate in an effective school is orderly, disciplined and comfortable. A commitment to excellence is evident and there are high expectations for student achievement.
- Students' goals and objectives are meaningful, clearly written, sequenced, and reviewed and updated periodically based on student progress data that are collected on a regular basis.
- Student achievement is recognized and rewarded frequently. Student progress is monitored using a criterion-reference approach; the measures used are directly related to the instructional objectives.
- Within effective classrooms, "down time" is kept to a minimum. Students spend a high percentage of their time actively engaged in learning tasks.
- Effective teachers spend a high percentage of their time involved in active instruction.
- Effective teachers adapt, modify and create curricular units for their own class that are sequenced and integrated into the long-range educational goals of the school.
- Effective schools tend to have a low teacher/student ratio.
- Administrators, teachers, support personnel, students, and parents in effective schools describe an atmosphere of cooperation and open communication.
- Parents support and are actively involved in effective schools.

From *Principles and Practices for School Integration of Students with Severe Disabilities: An Overview of the Literature* by James A. Knoll and Luanna Meyer. Syracuse: The Center on Human Policy, n.d. Used with permission.

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Appendices

Appendix A

Statewide Educational Goals for Students — 1991-1995

Goal One — Motivation to Learn

Students must be motivated to learn and to respond to the high expectations of their parents, teachers and school administrators and to their own inherent need to grow and develop. Connecticut public school students will:

- develop self-understanding and a positive self-concept;
- understand and strive to fulfill their own personal aspirations;
- develop positive feelings of self-worth which contribute to self-reliance, responsible behavior, personal growth, health and safety;
- demonstrate strong motivation and persistence to learn; and
- exhibit an inquisitive attitude, open-mindedness and curiosity.

Goal Two — Mastery of the Basic Skills

Proficiency in the basic skills is essential for acquiring knowledge and for success in our society. Connecticut public school students will:

- learn to communicate effectively in speech and writing;
- listen, view and read with understanding;
- acquire knowledge of and ability in mathematics;
- demonstrate skills necessary to locate and effectively use a variety of sources of information, including print materials, media, computers and other technology;
- demonstrate decision-making, reasoning and problem-solving skills alone and in groups; and
- demonstrate good study skills and skills necessary for lifelong learning.

Goal Three — Acquisition of Knowledge

Acquiring knowledge leads to fuller realization of individual potential and contributes to responsible citizenship. Connecticut public school students will:

- acquire the knowledge of science and technology, mathematics, history, social sciences, the creative and performing arts, literature and languages;
- acquire the knowledge necessary to use computers and other technologies for learning and problem solving;
- acquire an understanding and appreciation of the values and the intellectual and artistic achievements of their culture and other cultures; and
- take full advantage of opportunities to explore, develop and express their own uniqueness and creativity.

Statewide Educational Goals for Students — 1991-1995

Goal Four Competence in Life Skills

As adults, students will be challenged to function successfully in multiple roles — as a citizen, family member, parent, worker and consumer. Connecticut public school students will:

- demonstrate an ability to make informed career choices;
- understand the responsibilities of family membership and parenthood;
- demonstrate the ability to undertake the responsibilities of citizenship in their communities, in the state, in the nation and the world;
- understand human growth and development, the functions of the body, human sexuality and the lifelong value of physical fitness;
- understand and apply the basic elements of proper nutrition, avoidance of substance abuse, prevention and treatment of illness and management of stress;
- understand and develop personal goals and aspirations; and
- upon completion of a secondary-level program, demonstrate the skills, knowledge and competence required for success in meaningful employment, and be qualified to enter postsecondary education.

Goal Five Understanding Society's Values

As responsible citizens, students will enrich their family, community and culture and create equal opportunity for all persons to participate in and derive the benefits of their society. Connecticut public school students will:

- respect and appreciate diversity;
- understand the inherent strengths in a pluralistic society;
- recognize the necessity for moral and ethical conduct in society;
- understand and respond to the vital need for order under law;
- acquire the knowledge to live in harmony with the environment, and actively practice conservation of natural resources;
- respect the humanity they share with other people and live and work in harmony with others;
- acquire and apply an understanding and appreciation of the values and achievements of their own culture and other cultures; and
- show understanding of international issues which affect life on our planet and demonstrate skills needed to participate in a global society.

Appendix B
Performance Measures and Standards for Applied (Vocational) Education Programs in Comprehensive High Schools

Connecticut State Department of Education
Division of Educational Programs and Services
Bureau of Applied Curriculum, Technology and Career Information

Connecticut Performance Measures and Standards
Family and Consumer Sciences Education

The family and consumer sciences education measures are designed to assess the quality of secondary programs (Grades 7-12) in Connecticut schools.

Courses in family and consumer sciences education can be either semester- or year-long at the middle through high school levels. Exploratory classes are usually required of all students at one or more grades at the middle school level. These courses have instruction in a minimum of three family and consumer sciences education core topic areas. The program at the high school level includes two focuses: family/consumer and work/career. Courses may be specific to one core topic area, or they may be comprehensive, encompassing two or more core topic areas as listed below:

Family/consumer

A. Nutrition and food technology
B. Child development
C. Family life
D. Living environments
E. Fashion and textile technology
F. Personal management

Work/career

A. Foodservice management
B. Child-care services
C. Family and human services
D. Fashion and textile production and services

How Should the Family and Consumer Sciences Education Measures be Used?

Measure 1 is generic to all family and consumer sciences education courses. Students in all classes should be assessed.

The measures that are specific to particular core topic areas should be used to assess students in those classes (nutrition and food technology, child development, etc.).

For exploratory or comprehensive courses composed of more than one core topic area, teachers should select six to eight measures from the core topic areas which represent the contents of the course.

Sampling

Because of the numbers enrolled in family and consumer sciences education, sampling is recommended.

- A minimum of 25 percent of all eighth grade students enrolled in exploratory family and consumer sciences education should be assessed.
- A minimum of 50 percent of all high school students enrolled in a specific core topic area of family and consumer sciences education should be assessed.

Sampling should be conducted to ensure selection of students from all ability levels. Using the grade book, assess every second (50 percent) or every fourth (25 percent) student or assess every second or fourth class or section.

Connecticut Performance Measures and Standards
Family and Consumer Sciences Education

Measure I — Generic

Measures

The student will:

1. develop effective communication skills;
2. demonstrate the decision-making process within a group structure;
3. assess the impact of computers and technology on individuals and families;
4. identify and demonstrate the use of community resources;
5. demonstrate leadership skills and community involvement;
6. identify various family and consumer sciences occupations and educational training requirements for each;
7. demonstrate the use of time management skills; and
8. collect, interpret and evaluate current events related to the specific area of study in family and consumer sciences.

Standard

Eighty percent of students in a family and consumer sciences education course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. checklists on group work;
2. research and reports on workplace skills;
3. role-playing;
4. reviews and critiques of video/TV programs;
5. FHA/HERO participation and programs of work;
6. news articles for school or community papers;
7. observations;
8. journal notations and interpretations; and
9. student portfolios.

Target

Twenty-five percent of eighth grade students enrolled in family and consumer sciences education courses.
Fifty percent of high school students enrolled in family and consumer sciences education courses.

Measure II — Child Development

Measures

The student will:

1. identify patterns of human development;
2. identify roles and responsibilities of parenting (adult-child relationships);
3. distinguish between hereditary and environmental influences on children;
4. demonstrate the safety and health responsibilities of caregivers;
5. describe positive techniques for guiding children's behavior; and
6. describe the impact of prenatal care on the health of the mother and infant.

Standard

Eighty percent of students in a family and consumer sciences education course or child development course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. journals of observation on various stages of development;
2. case studies;
3. role-playing;
4. research reports;
5. presentations to class, community or parent group;
6. planning and conducting activities with children;
7. checklists/interviews;
8. theory and knowledge tests; and
9. student portfolios.

Target

Twenty-five percent of eighth grade students enrolled in family and consumer sciences education courses.
Fifty percent of high school students enrolled in child development courses.

Measure III — Family Life

Measures

The student will:

1. differentiate between the rights and responsibilities of family members;
2. identify the various lifestyle choices/family structures in society;
3. examine health issues related to the family;
4. apply the decision-making process in planning family finances; and
5. evaluate physical, social, emotional and/or mental changes in the life cycle.

Standard

Eighty percent of students in a family and consumer sciences education course or family life course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. case studies of family finances;
2. checklist on decision-making process;
3. theory and knowledge tests;
4. student portfolios;
5. research;
6. role-playing;
7. presentations to class, community or parent group;
8. panel discussions; and
9. reports.

Target

Twenty-five percent of eighth grade students enrolled in family and consumer sciences education courses. Fifty percent of high school students enrolled in family life courses.

Measure IV — Fashion and Textile Technology

Measures

The student will:

1. analyze or identify the quality of construction in textile products;
2. create an original textile product by repair, design or recycling;
3. analyze or interpret information on a textile product label;
4. identify ways clothing expresses personality and lifestyle in various cultures; and
5. identify entrepreneurial opportunities in textile technology.

Standard

Eighty percent of students in a family and consumer sciences education course or fashion and textile technology course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. analysis of color, texture, and fashion features;
2. construction of textile projects;
3. checklists on following written and verbal instructions;
4. research on and critiques of trends in clothing technology;
5. reports on trends relating to lifestyle and cultural fashion;
6. reports or interviews on careers in the textile field;
7. design of products and processes for marketing; and
8. theory and knowledge tests.

Target

Twenty-five percent of eighth grade students enrolled in family and consumer sciences education courses. Fifty percent of high school students enrolled in fashion and textile technology courses.

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Connecticut Performance Measures and Standards
Family and Consumer Sciences Education (continued)

Measure V — Living Environments

Measures

The student will:

1. identify housing needs for the family and the individual;
2. apply the principles and elements of design to planning the living environments;
3. identify cultural and historical influences in home environments;
4. develop a procedure for the selection and use of energy efficient, safe and ecologically sound materials; and
5. compare and interpret consumer information regarding housing costs and needs.

Standard

Eighty percent of students in a family and consumer sciences education course or living environments course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. research;
2. computer software application;
3. scrapbooks and portfolios;
4. case studies for family housing issues;
5. theory and knowledge tests;
6. computer-generated or hand-drawn floor plans; and
7. projects.

Target

Twenty-five percent of eighth grade students enrolled in family and consumer sciences education courses. Fifty percent of high school students enrolled in living environments courses.

Measure VI — Nutrition and Food Technology

Measures

The student will:

1. describe the relationship between a healthy diet and personal well-being throughout the life cycle;
2. apply current dietary recommendations to personal diet and/or family meal planning;
3. analyze various forms of the same food with regard to cost, quality and nutritional value;
4. identify safe and sanitary methods of handling food products and equipment;
5. demonstrate skill in planning, preparing and serving a quality product; and
6. identify the relationships among food, culture, social customs and family traditions.

Standard

Eighty percent of students in a family and consumer sciences education course or nutrition and food technology course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. laboratory checklists/observations;
2. laboratory planning and implementation;
3. demonstrations;
4. written reports;
5. computer analysis;
6. theory and knowledge tests;
7. student portfolios; and
8. completion of a product in the laboratory or other setting.

Target

Twenty-five percent of eighth grade students enrolled in family and consumer sciences education courses. Fifty percent of high school students enrolled in nutrition and food technology courses.

Measure VII — Personal Management

Measures

The student will:

1. plan a personal budget;
2. outline the rights and responsibilities of an informed consumer;
3. discuss personal routines as they relate to health and fitness;
4. analyze the impact of self-esteem;
5. identify short- and long-term goals; and
6. demonstrate skills for independent living.

Standard

Eighty percent of students in a family and consumer sciences education course or personal management course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. personal budget;
2. student portfolios;
3. theory and knowledge tests;
4. research;
5. role-playing;
6. presentations to class, community and/or parent groups; and
7. reports.

Target

Twenty-five percent of eighth grade students enrolled in family and consumer sciences education courses. Fifty percent of high school students enrolled in personal management courses.

Measure VIII — Child-Care Services

Measures

The student will:

1. work cooperatively with staff, parents and volunteers in classroom/laboratory settings;
2. demonstrate academic and personal skills needed to obtain and maintain employment;
3. develop solutions for issues and problems encountered in the work setting;
4. design developmentally appropriate experiences for children;
5. critique the safety and health features of a child-care setting; and
6. research management issues related to nursery/day care.

Standard

Eighty percent of students in a child-care services course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. journal of observation;
2. case studies;
3. role-playing;
4. research reports;
5. presentations to class, community and/or parent groups;
6. planning and conducting activities with children;
7. checklists/interviews, lab observation;
8. theory and knowledge tests;
9. student portfolios; and
10. videos for student assessment.

Target

Fifty percent of high school students enrolled in child-care services courses.

Connecticut Performance Measures and Standards
Family and Consumer Sciences Education (continued)

Measure IX — Fashion and Textile Production and Services

Measures

The student will:

1. identify wholesale and retail store management practices in a global economy;
2. develop entrepreneurial skills for a diverse economy;
3. describe the impact technology has on the fashion and textile industry;
4. identify career opportunities in design, production, maintenance, restoration, and/or marketing of fashion and textiles;
5. explore the psychology of marketing; and
6. evaluate the environmental impact of materials and processes used in the fashion and technology industry.

Standard

Eighty percent of students in a fashion and textile production and services course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. demonstrations;
2. student portfolios;
3. theory and knowledge tests;
4. research reports;
5. design and construction of textile products;
6. role-playing; and
7. presentations.

Target

Fifty percent of high school students enrolled in fashion and textile production and services courses.

Measure X — Foodservice Management

Measures

The student will:

1. demonstrate academic and personal skills needed to be employed in the foodservice industry;
2. apply management skills to the operation of foodservice establishments;
3. perform standards of sanitation, safety and personal hygiene;
4. demonstrate the principles involved in quantity food preparation;
5. practice skills and attitudes necessary for customer service; and
6. identify individual job responsibilities related to levels of operation.

Standard

Eighty percent of students in a foodservice management course should demonstrate proficiency in the above measures.

Suggested Student Assessment Methods

1. laboratory checklists/observations;
2. laboratory planning and implementation;
3. demonstrations;
4. written reports;
5. computer analysis;
6. theory and knowledge tests;
7. student portfolios;
8. interviews;
9. research reports;
10. presentations;
11. role-playing; and
12. video recording.

Target

Fifty percent of high school students enrolled in foodservice management courses.

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